RECORD AND BRIEFS

No. 142, Original

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In The
Supreme Court of the United States

STATE OF FLORIDA,

Plaintiff,

v.

STATE OF GEORGIA,

Defendant.

FLORIDA'S MOTION FOR LEAVE TO FILE A COMPLAINT, COMPLAINT, AND BRIEF IN SUPPORT OF MOTION

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No. ____, Original

In The
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STATE OF FLORIDA,

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MOTION FOR LEAVE TO FILE A COMPLAINT

Pursuant to Supreme Court Rule 17, the State of Florida asks leave of the Court to file a complaint against the State of Georgia to equitably apportion the waters of the Apalachicola-Chattahoochee-Flint River Basin. This motion is accompanied by a complaint and supporting brief.

Respectfully submitted,

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COMPLAINT FOR EQUITABLE APPORTIONMENT AND INJUNCTIVE RELIEF

The State of Florida, plaintiff, on its own behalf and on behalf of the citizens of Florida, alleges as follows:

1. This is an action by the State of Florida to equitably apportion the interstate waters of the Apalachicola-Chattahoochee-Flint River Basin ("ACF Basin").

FACTUAL BACKGROUND

2. The Chattahoochee River arises in northern Georgia and flows 430 miles to its confluence with the Flint River at the Georgia-Florida state line. The southern half of the Chattahoochee River forms the

border between Georgia and Alabama. The Flint River also arises in the State of Georgia, before converging with the Chattahoochee River to form Florida's Apalachicola River (the "River"). The River flows into the Gulf of Mexico at the Apalachicola Bay (the "Bay"). Collectively, these three rivers and their surrounds comprise the ACF Basin. A map of the ACF Basin is provided at App. 1.

3. The waters of the Chattahoochee and Flint River Basins provide essential inflows to the Apalachicola River and Bay (collectively, the "Apalachicola Region" or the "Region"). The flow of the Apalachicola River at the Georgia-Florida border, and the resulting inflows to the River and Bay, are created by the combined inflows of the Chattahoochee and Flint Rivers, their tributaries and hydrologically connected groundwater. These waters have nourished a rare and exemplary ecosystem that state, national, and international bodies have recognized for the diversity of its plant and animal species.

4. The Apalachicola Region is also a unique and vibrant cultural, social and economic community, dependent primarily on the environmental health of the River and Bay. The ecosystem fuels a resource based economy that depends on the harvest of commercially salable species, most notably the Eastern Oyster. Generations of inhabitants have been defined by their existence in this economy and have lived, worked and prospered in a culturally rich community.

5. At present, the Apalachicola Region's ecosystem and economy are suffering serious harm because of Georgia's increasing storage and consumption of water from both the Chattahoochee and Flint River Basins. Large, and ever-increasing, amounts of water (taken both as surface water and the hydrologically connected groundwater) are withdrawn, impounded and consumed upstream for municipal, industrial, recreational, and agricultural uses permitted by Georgia. These uses are forcing Floridians to shoulder the heavy burden of Georgia's growth.

6. Florida fisheries have suffered declines as a result of Georgia's upstream storage and consumption of water from the Chattahoochee and Flint River Basins. Flow depletions from the Georgia portion of the ACF Basin have already shrunk available riverine and estuarine habitats in the Apalachicola Region and precipitated a collapse of Florida's oyster fishery. The federal government recently recognized the collapse and issued a fishery disaster declaration for the oyster industry in Florida.

7. Georgia officials have projected that Georgia's consumption of ACF Basin water will nearly double from present levels by 2040. *See* Affidavit of Judson H. Turner, Director of the Georgia Environmental Protection Division, provided at App. 3-27. If Georgia's consumption increases as planned, the sole source of fresh water sustaining the Apalachicola River and Bay will shrink further, jeopardizing the viability of the Apalachicola Region's ecology, economy, and way of life.

8. Before reaching Florida, the waters of the Chattahoochee River are temporarily stored in reservoirs owned and operated by the U.S. Army Corps of Engineers (the "Corps"). From 1990 through 2012, the Corps' operation of these reservoirs, and in particular operation of Buford Dam, which creates Lake Sidney Lanier in Georgia, was the focus of intense, multi-state and multi-jurisdiction litigation culminating in two decisions of the Circuit Courts of Appeals. *Se. Fed. Power Customers, Inc. v. Geren*, 514 F.3d 1316 (D.C. Cir. 2008); *In re MDL-1824 Tri-State Water Rights Litig.*, 644 F.3d 1160 (11th Cir. 2011). That litigation, directed solely at federal agencies, focused on the Corps' obligations under various federal statutes, including the Endangered Species Act ("ESA"), the Flood Control Act of 1944, the National Environmental Policy Act, the Rivers and Harbors Act of 1899, and the Water Supply Act of 1958. The lower court litigation did not, and could not, address the fundamental problem facing Florida – Georgia's ever-increasing storage and use of water that has historically nourished the Apalachicola Region.

9. A significant, yet ultimately unsuccessful, effort was made to resolve that problem. Beginning in the late 1990s, and into the early 2000s, Florida attempted to resolve its concerns through negotiation. In early 1992, Florida, Georgia, and Alabama (collectively, the "States") commenced a process to study the needs of the ACF Basin ("Comprehensive Study"). The Comprehensive Study arose from the States'

efforts to settle litigation the State of Alabama initiated against the Corps. The States memorialized their intent in a Memorandum of Agreement dated January 3, 1992, which was approved by the U.S. District Court for the Northern District of Alabama.

10. In 1997, following the completion of the Comprehensive Study, Congress passed the Apalachicola-Chattahoochee-Flint River Basin Compact, Pub. L. No. 105104, 111 Stat. 2219 (1997) ("ACF Compact"), which was subsequently ratified by all three States. The parties to the ACF Compact agreed to develop an allocation formula for equitably apportioning the waters of the ACF Basin among the States while "protecting the water quality, ecology, and biodiversity" of the Apalachicola Region. ACF Compact Art. VII(a). The ACF Compact recognized that, although upstream uses could continue to develop during the pendency of those negotiations, those uses would not become "permanent, vested or perpetual rights to the amounts of water used between January 3, 1992 and the date on which the [ACF Compact] Commission adopts an allocation formula." ACF Compact Art. VII(c). While the States could have resolved their differences through this ACF Compact process, Georgia's bad faith caused the negotiations to disintegrate, resulting in the demise of the ACF Compact in 2003.

11. Georgia took advantage of the time between initiation of the Comprehensive Study in 1992 and failure of the ACF Compact in 2003 to continually increase its consumptive uses. Since 1992, Georgia's

municipal, industrial, recreational, and agricultural uses of ACF Basin water have grown significantly, but under the terms of the Memorandum of Agreement and the ACF Compact, Georgia had no entitlement to any of these inflated uses. The pattern did not end after the ACF Compact failed, but has continued unabated, despite another decade of lower court litigation and failed judicial and non-judicial settlement efforts. Indeed, Florida has made numerous attempts to resolve this interstate dispute through formal and informal discussions, as well as court-sponsored mediation (including sessions facilitated by the U.S. Secretary of the Interior and the Council on Environmental Quality). *See, e.g.*, Joint Motion for Order Regarding Confidentiality of Settlement Negotiations, *In re Tri-State Water Rights Litig.*, (No. 315). All of these efforts ultimately failed.

12. Florida has exhausted all other reasonable means to arrest Georgia's unchecked use of water and halt the continuing degradation of the Apalachicola Region. Florida now, of necessity, invokes the Court's original jurisdiction seeking an appropriate apportionment to redress existing harm and to avert additional harmful depletions caused by uses in Georgia. There is no other forum in which Florida may vindicate its interests and obtain the requisite relief against Georgia.

13. Florida's action for an equitable apportionment includes all waters hydrologically connected to the Chattahoochee and Flint Rivers (including,

without limitation, groundwater, rivers, streams, creeks, draws, and drainages).

14. Alabama lies upstream of Florida within the ACF Basin. Although not opposed to Alabama's participation in this action, Florida asserts no wrongful act by Alabama and seeks no affirmative relief against Alabama. Therefore, Alabama is not named in this action. *Compare Nebraska v. Wyoming*, 295 U.S. 40 (1935).

15. Florida also seeks no affirmative relief against the United States in this action with respect to the Corps' operation of the federally authorized dam and reservoir system, or any other interest.

JURISDICTION

16. The Court has jurisdiction pursuant to Article III, Section 2, Clause 2 of the United States Constitution and 28 U.S.C. § 1251(a) (2011).

EQUITABLE APPORTIONMENT

The Apalachicola-Chattahoochee-Flint River Basin

17. The Chattahoochee River begins in the Blue Ridge Mountains in northeastern Georgia and flows through metropolitan Atlanta and to the southwest until it turns south and forms the border of Georgia and Alabama. The Chattahoochee River and its tributaries provide municipal and industrial water to a majority of the Atlanta metropolitan population

including Fulton, DeKalb, Gwinnett, Forsyth, Douglas and Cobb counties, as well as the city of Columbus. Most surface water intakes are located on the Chattahoochee River, its smaller tributaries, and Lake Lanier.

18. The Flint River rises in the metropolitan Atlanta area and flows generally southward through Albany and on to the Georgia-Florida border. The Flint River Basin is the source of water for hundreds of thousands of acres of irrigated land in southern Georgia, most of which is served by irrigation wells.

19. The southern half of the Flint River and some of its tributaries are hydrologically connected to the underlying Floridan Aquifer. In this region, groundwater discharge through the streambed, stream banks, and springs from the Floridan Aquifer contribute to the total flows of the river during years of normal precipitation. That percentage increases in years with below-normal precipitation.

20. At the Georgia-Florida border, the Flint River joins with the Chattahoochee River at the Jim Woodruff Lock and Dam ("Woodruff Dam") to form Lake Seminole. At Lake Seminole, the unified Chattahoochee and Flint Rivers become the Apalachicola River. The Apalachicola River lies entirely within the State of Florida and flows, unimpeded by any dam, southward across Florida's panhandle and feeds into the Apalachicola Bay at the Gulf of Mexico.

21. Water withdrawals from the Chattahoochee and Flint River Basins, either directly from the Chattahoochee and Flint Rivers and their tributaries or indirectly from hydrologically connected groundwater, reduce the amount of water flowing to the Apalachicola River at all times, but the effects are especially apparent during the low flow summer and fall periods. Therefore, water use in Georgia has a direct hydrologic impact on Florida.

22. The Corps operates five dams on the Chattahoochee River (in downstream order): Buford, West Point, Walter F. George, George W. Andrews and Woodruff. Woodruff also impounds water from the Flint River and marks the upstream end of the Apalachicola River. Although independent facilities, the Corps' dams are operated as a unified whole to achieve multiple project purposes.

23. Water storage and consumption in Georgia also affects how water is released to Florida from these federal reservoirs. The Corps determines how much water to release from its reservoirs based, in part, upon calculated inflows to the ACF Basin. Georgia's storage and consumption reduces those inflows. As a result, as Georgia's uses increase, the calculated inflows to the ACF Basin decline, and even less water is released from the Corps' reservoirs. The net result of Georgia's unmitigated water use is that less water reaches Florida due to both the hydrologic depletions and the Corps' operational protocols.

The Unique and Rich Ecology of the Apalachicola Region

24. Maintaining an ample flow of water from the Chattahoochee and Flint River Basins is critical to preserving the ecology of the Apalachicola Region. Georgia's current storage and consumption has already injured this precious resource.

25. The rich biodiversity of the Apalachicola Region in Florida is reflected in the presence of 142 freshwater and estuarine fish species (99 species in nontidal reaches and 43 species in tidal reaches of the River), 26 species of mussels (including 3 federally listed mussels and 4 candidate species proposed for federal listing), and over 1,600 species of plants (including 342 species in wetland forests of the River floodplain).

26. The Apalachicola River has the largest river floodplain forest in Florida and the greatest number of freshwater fish species in Florida. The Apalachicola Basin has the greatest herpetofaunal species richness in North America north of Mexico and is one of the most important areas in the United States for reptiles and amphibians (particularly anurans, salamanders, snakes, and turtles). Also, Ogeechee tupelo trees in the floodplain forest of the Apalachicola River are the principal source of commercially produced tupelo honey in the United States.

27. The Apalachicola Bay has been historically one of the most productive estuarine systems on the Gulf Coast. It is home to the congressionally created Apalachicola National Estuarine Research Reserve ("ANERR"), which encompasses 246,766 acres of land and water, making it the second largest of the 28 national estuarine research reserves. ANERR includes two barrier islands and part of a third, which includes the lower 20 miles of the Apalachicola River and its floodplain, adjoining uplands, and the Apalachicola Bay. ANERR received international recognition when it was designated as a Biosphere Reserve by the United Nations Educational, Scientific, and Cultural Organization.

28. The rich and complex ecosystem of the Apalachicola Region developed under the Chattahoochee and Flint Rivers' unimpaired, natural flow regime. This natural flow regime was responsible for the creation of river channel habitat, cyclical inundations of the floodplain, inter-connections of floodplain channels, maintenance of a suitable salinity regime in the Bay, and inputs of essential nutrients to the Bay.

29. The Apalachicola Region provides habitat for more than 100 species that the federal government and the State of Florida have designated as endangered, threatened, or species of concern. These species, and their federally protected habitats, depend upon the historical flow patterns of the Apalachicola River for their continued existence.

Threatened and endangered species also reside in the waters within the Georgia portion of the ACF Basin.

The Social and Economic Significance of the Apalachicola River and Bay

30. The environmental health of the Apalachicola Region directly affects the local economy and sociology. The local population of Franklin County and the surrounding region is highly dependent on the region's natural resources, which support both the regional economy and a unique way of life that has evolved around the seafood and coastal industries.

31. Freshwater inflows provide essential nutrients to the Bay that make it one of the most productive areas for fish and shellfish in the entire Gulf of Mexico. Freshwater inflows also reduce the Bay's salinity, which is essential to oysters and other commercially salable species, by limiting predation by marine species and disease.

32. Commercially salable species in the Bay include the Eastern Oyster, shrimp, blue crab, and several varieties of finfish. Until recently, the Bay produced about 12 percent of the nation's Eastern Oysters. Much of the oyster, shrimp and fish harvest is exported for consumption throughout the United States.

33. The species that inhabit the Apalachicola Region provide a wide range of economic benefits to the Region and to Florida. Similarly, the Apalachicola

Region supports significant tourism and recreation-based industries. Tourists and outdoor enthusiasts engage in recreation in, on, and around the River and Bay. Outdoor recreation in the Apalachicola Region includes a wide spectrum of activities, including kayaking, canoeing, mountain biking, horseback riding, hunting, fishing, ATV, and motorbike riding, backpacking, birding, and botanical study.

34. The resources within the Apalachicola Region also provide substantial economic benefits in the form of ecosystem services, *e.g.*, water filtration, waste assimilation, flood attenuation, and flood mitigation. All of these benefits accrue as a direct result of the ecosystem that is created from the flows of the Apalachicola River.

35. The region's economic and sociological interests cannot be replaced with other industries or mitigated through relocation. Indeed, if the seafood industry disappears in Apalachicola, one of the most storied working waterfronts in the State will be lost to history.

Efforts to Protect the Apalachicola River and Bay

36. Because of its value and importance to its citizenry, Florida has made a substantial commitment of public resources to protect the Apalachicola Region. The altered flow regime caused by Georgia has had, and continues to have, an adverse impact on Florida's preservation efforts, undermining Florida's extraordinary investments.

37. Florida has designated areas within the ANERR as Outstanding Florida Waters, and Apalachicola Bay as an Aquatic Preserve. Both designations provide heightened legal protections beyond those afforded other waters of the State.

38. In addition, Florida has funded many of the natural resource management programs for the Apalachicola River and Bay. These protective efforts include the purchase of more than 329,000 acres within the Apalachicola Region. Of that total, approximately one-third was purchased since January 1999, at a cost exceeding $120 million.

39. Florida continues to show a high level of commitment to Apalachicola preservation. This year's State budget included nearly $5 million for water quality restoration projects in the Apalachicola Bay estuary and for oyster shelling and research to help industry recovery.

40. In 2006, the Northwest Florida Water Management District, the State body responsible for water management in the Apalachicola River Basin, adopted rules that effectively preclude any further consumptive withdrawals of surface water from the Apalachicola River, the Chipola River, and the Chipola Cutoff. This extraordinary measure was undertaken expressly to protect the ecosystem of the Apalachicola Region.

41. Total land area within the Apalachicola River Basin acquired for conservation purposes by

local, State, federal, and private actors exceeds an area 12 times larger than the District of Columbia.

The State of Georgia's Increasing Consumption of Water and its Adverse Impact on the Apalachicola River Basin and Bay

42. Georgia's water storage and consumption upstream of the Apalachicola River in the Chattahoochee and Flint River Basins has reduced Apalachicola River flows entering Florida. This reduction has damaged numerous species and habitats in the Apalachicola Region's ecosystem, and the overall economic, environmental, and social health and viability of the region.

43. Georgia's storage and consumption causes significant economic injury to Florida. The River and Bay ecosystems provide important services to Florida's economy, and when these ecosystems are disrupted, these valuable services are placed at risk. The recent collapse of the oyster fishery in Apalachicola Bay is one example of the connection between the River and Bay ecosystems and the economy of the State.

44. Long-term climatic data has not shown significant changes in precipitation. However, the amount of discharge to the rivers and streams of the ACF Basin generated by precipitation events has diminished over time. Changing climatic conditions cannot, therefore, explain reductions in inflows to the Apalachicola River.

45. The primary uses of water in the Chattahoochee River Basin are municipal and industrial. The metro-Atlanta region presently withdraws and uses 360 million gallons per day ("mgd") in the upper Chattahoochee River. App. 6. Georgia expects its demands to nearly double from present levels and by 2040, expects to withdraw 705 mgd. App. 7.

46. The primary uses of water in the Flint River Basin are agricultural. Georgia has authorized agricultural users to withdraw and consume water from the Flint River Basin for irrigation purposes. These users irrigate approximately 563,000 acres (879 square miles). Annual withdrawals vary considerably depending on the summertime precipitation patterns but withdrawals typically increase during drought periods. In addition to this existing irrigation, Georgia has granted applications to irrigate additional acreage in the Flint River Basin. These granted applications, when combined with existing irrigation, total 843,000 acres (1,317 square miles), an area larger than the State of Rhode Island. Georgia also has numerous additional applications pending approval. A map prepared by the State of Georgia illustrating the location and density of agricultural wells in the Chattahoochee River and Flint River Basins is provided at App. 2.

47. In the Flint River Basin, agricultural irrigation represents the largest volume of water use. Of the total number of irrigated acres (563,000), approximately 160,000 acres are irrigated by diverting water directly from streams throughout the Basin.

The irrigation corresponds with the hottest and driest times of the year when evapotranspiration through crops is highest. Irrigation diversions from surface and groundwater sources cause streams and groundwater levels, which are naturally approaching their seasonally lowest levels, to decline even further.

48. Approximately 120 mgd are withdrawn from the Flint River Basin for municipal and industrial use.

49. Over 20,000 non-federal water impoundments of various sizes have been constructed in the ACF Basin in Georgia. These impoundments intercept flow which would otherwise discharge to the ACF river system. The cumulative impact of these impoundments is significant, particularly during dry periods. The beneficial effects to the Apalachicola River from rainfall events during dry periods are either attenuated or completely eliminated when the impoundments intercept flow. Much of this impounded water never arrives downstream because of increased evaporative losses and agricultural withdrawals. These impoundments continue to be constructed in the Georgia portion of the ACF Basin.

50. The existing storage, evaporation, and consumption of water by Georgia's municipal, industrial, recreational, and agricultural users have diminished the amount of water entering Florida in spring and summer of drought years by as much as 3,000-4,000 cubic feet per second ("cfs"). This has altered the flow regime of the Apalachicola River during the

most vulnerable times for riverine and estuarine species. In recent drought years, Apalachicola River flows averaged less than 5,500 cfs throughout the entire late-spring-summer-fall period from May through December. Such long durations of extremely low flows were unprecedented before 2000.

51. As recognized by federal and state agencies, including the U.S. Geological Survey, well pumping in Georgia's Flint River Basin directly affects the amount of water flowing in the Flint River and, thus, into Florida's Apalachicola Basin. *Stream-Aquifer Relations and the Potentiometric Surface of the Upper Floridan Aquifer in the Lower Apalachicola-Chattahoochee-Flint River Basin in part of Georgia, Florida, and Alabama* (USGS 2002).

52. As recognized by the U.S. Geological Survey, water level declines have caused substantial changes in the floodplain habitats throughout the Apalachicola River. *Water-Level Decline in the Apalachicola River, Florida, from 1954 to 2002, and Effects on Floodplain Habitats* (USGS 2006).

53. As recognized by the U.S. Fish and Wildlife Service, upstream consumption is affecting threatened and endangered species and habitats along the Apalachicola River. *See Biological Opinion on the U.S. Army Corps of Engineers, Mobile District, Revised Interim Operating Plan for Jim Woodruff Dam and the Associated Releases to the Apalachicola River* (USFWS 2012).

54. As a result of actions authorized by Georgia, Florida has already suffered harm of a serious magnitude to the Apalachicola Region's ecosystem and equities that arise from that ecosystem. Reduced freshwater inflows to the Apalachicola Bay over the past several years precipitated a collapse of the Apalachicola Bay oyster fishery, resulting in significant economic hardship to oystermen and others dependent upon oyster harvests.

55. In 2012, Florida experienced the lowest average annual flow of the Apalachicola River in the 90-year period of record at the U.S. Geological Survey stream gage at Chattahoochee, Florida (immediately below Woodruff Dam). The average annual flow in 2012 was 65 percent lower than the average annual flow for 1923-2012. This record low flow year followed the fourth-lowest flow on record in 2011, resulting in an exceptionally low two-year period that was extremely harmful to species and habitats throughout the Apalachicola Region.

56. The resulting low flows reduced available habitats in the Apalachicola River and thrust salinity levels in Apalachicola Bay above tolerable levels. Apalachicola Bay winter season oyster landings for 2012-2013 were 62.3 percent lower than the previous five year average and were the lowest ever recorded in Apalachicola Bay by the Florida Marine Fisheries Information System. Diminished harvest continues into the 2013-2014 winter season. As a result, the

surrounding economy experienced a severe contraction and led Florida Governor Rick Scott to seek a declaration of a commercial fisheries failure for the oyster industry from the U.S. Department of Commerce, which was granted in August 2013.

57. Georgia's continued and increasing use of water will further harm Floridians who rely upon the Apalachicola Bay. If inflows from the Apalachicola River continue to be reduced, the productivity of the Bay will be irreparably harmed.

58. Adverse impacts are equally acute on the Apalachicola River. Since 2006, thousands of threatened and endangered mussels have died as a result of low summer flows, the threatened Gulf sturgeon's spawning habitat has been rendered inaccessible, and habitat for freshwater fish spawning and recruitment, along with floodplain habitats, have been adversely affected.

59. As Georgia's water uses grow, the amount of water entering Florida will continue to decrease, essential fish and wildlife habitats will constrict, and Florida will suffer additional irreparable harm. As Georgia's upstream storage and consumption grows over time, low flow events will become more frequent and increase in severity, diminishing the likelihood that key species will survive and precluding any chance of recovery over the long term.

60. The situation is dire and the need for relief immediate. Florida has a right to its equitable share of the waters that have flowed historically to it from the Chattahoochee and Flint Rivers. Florida cannot and should not suffer injury in order to satiate Georgia's unrelenting thirst.

PRAYER FOR RELIEF

Florida prays that the Court require Georgia to answer Florida's complaint, appoint a special master, and after due proceedings, enter a decree equitably apportioning the waters of the ACF Basin.

Florida further prays that the Court enter an order enjoining Georgia, its privies, assigns, lessees, and other persons claiming under it, from interfering with Florida's rights, and capping Georgia's overall depletive water uses at the level then existing on January 3, 1992.

Florida also prays that the Court award Florida any other relief that the Court may deem just and appropriate.

Respectfully submitted,

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BRIEF IN SUPPORT OF MOTION FOR LEAVE TO FILE A COMPLAINT

The State of Florida submits this brief in support of its Motion for Leave to File a Complaint.

STATEMENT OF JURISDICTION

The Court has jurisdiction pursuant to Article III, § 2, cl. 2 of the United States Constitution and 28 U.S.C. § 1251(a).

INTRODUCTION

"A river," as Justice Holmes once observed, "is more than an amenity, it is a treasure." *New Jersey v. New York*, 283 U.S. 336, 342 (1931). Florida's Apalachicola River and Bay (the "Apalachicola Region") is likewise a treasure – a unique and vibrant cultural, social and economic community. Settlers established the port City of Apalachicola in the early nineteenth century. The economy and way of life those early settlers created has flourished for generations and has always depended on the environmental health of the River and Bay.

Today, however, the community, ecology, and economy of the Apalachicola Region, which have already suffered harm of a serious magnitude, are at grave risk of future harm because upstream diversions are reducing freshwater inflows. The State of Georgia is storing and consuming the waters of the

Apalachicola-Chattahoochee-Flint River Basin ("ACF Basin") and threatening the Apalachicola Region with devastation. Large, and ever-increasing, amounts of water (taken both as surface water and the hydrologically connected groundwater) are withdrawn and impounded for municipal, industrial, recreational, and agricultural uses permitted by Georgia. Left unchecked, Georgia's current and projected use of water threatens a biological and economic collapse of the Apalachicola Region. Florida, therefore, calls upon this Court to arrest Georgia's unchecked storage and consumption of water, which has despoiled the fragile ecosystem upon which the Apalachicola Region's social, cultural, and economic structures are founded.[1]

The adjudication of Florida's claim against Georgia for equitable apportionment of the waters of the ACF Basin falls squarely within the Court's original jurisdiction over controversies between two sovereign states. First, there is an actual, existing, and ongoing dispute over how these interstate waters are to be apportioned. Next, Georgia's actions have caused, and if not remedied will further cause, direct, immediate, and irreparable injury to Florida.

Finally, there is no other forum available to resolve the issues presented. Prior lower court litigation,

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[1] Alabama lies upstream of Florida within the ACF Basin. Although not opposed to Alabama's participation in this action, Florida asserts no wrongful act by Alabama and seeks no affirmative relief against Alabama. Therefore, Alabama is not named in this action. *Compare Nebraska v. Wyoming*, 295 U.S. 40 (1935).

directed at federal reservoir operations, did not, and could not, fully address the injury caused by Georgia's actions.[2] All non-judicial efforts, including negotiations pursuant to a now failed interstate compact, negotiations surrounding the lower court disputes, and other negotiations between the respective States' Governors over the past twenty years, have proven unsuccessful. The exercise of original jurisdiction by this Court represents the only available means to apportion equitably the waters of the ACF Basin and resolve long-standing conflicts between the States.

STATEMENT OF THE CASE

Florida seeks an equitable apportionment of the waters of the ACF Basin and appropriate injunctive relief against Georgia to sustain an adequate flow of fresh water into the Apalachicola Region.

I. THE WATERS OF THE ACF BASIN.

The flow of the Apalachicola River at the Georgia-Florida border (and hence the principal freshwater inflow into the Apalachicola Region) is created by the combined inflows of the Chattahoochee and Flint Rivers, their tributaries and hydrologically connected

[2] The subject matter of that litigation involved the Corps' legal authority to support water supply demands from Lake Lanier (Buford Dam) in Georgia. The litigation did not seek to limit Georgia's withdrawals of water from the ACF Basin.

groundwater. App. 1. Water enters the Apalachicola River from the Chattahoochee and Flint River Basins with a combined drainage area of approximately 17,000 square miles in Georgia and Alabama. The Chattahoochee River Basin comprises 8,770 square miles, while the Flint River Basin comprises 8,460 square miles.

The Chattahoochee River begins in the Blue Ridge Mountains in northeastern Georgia and flows through metropolitan Atlanta, near the headwaters of the Flint River. From Atlanta, the Chattahoochee River flows southwest for approximately 75 miles and then turns south and forms the border between the States of Georgia and Alabama.

The U.S. Army Corps of Engineers ("Corps") owns and operates five major dams on the Chattahoochee River: Buford, West Point, Walter F. George, George W. Andrews, and Jim Woodruff Lock and Dam ("Woodruff Dam"). The reservoirs impounded by the dams (Lakes Lanier, West Point, George, Eufaula, and Seminole, respectively) have a combined conservation storage capacity of about 1.6 million acre-feet. The facilities are operated as a unit to support various purposes including flood control, hydroelectric power generation, navigation, recreation, water supply, water quality, and fish and wildlife conservation. The City of Atlanta and the surrounding metropolitan area take water directly from and below the largest of these facilities, Buford Dam, which was authorized by the 1945 and 1946 River and Harbor Acts.

Other smaller cities like Columbus also withdraw water from the Chattahoochee.

The headwaters of the Flint River are in the metropolitan Atlanta area. From there, the Flint River flows generally southward through the City of Albany, Georgia and on south where it joins with the Chattahoochee River at Woodruff Dam near the Georgia-Florida border.

At Lake Seminole, the united Flint and Chattahoochee Rivers become the Apalachicola River. The Apalachicola River flows southward unimpeded across Florida's panhandle and into the Apalachicola Bay in the Gulf of Mexico. The Apalachicola River remains one of the last undammed rivers in the southeast United States.

Over many centuries, the annual and seasonal flow variability of the Apalachicola River has created a unique ecological setting. A rich and varied number of species in the Apalachicola Region flourish and reproduce based upon the habitat created, and nutrients transported, by the Apalachicola River's natural flow regime. The ecosystems created by the Apalachicola River have been recognized by both the United States and the State of Florida as having immense natural, social, and cultural value. For instance, the Apalachicola National Estuarine Research Reserve ("ANERR") is one of only 28 such reserves designated by the National Oceanic and Atmospheric Administration ("NOAA").

The Apalachicola Bay is one of the most productive estuarine systems in the Gulf of Mexico. Until recently, the Bay has produced 12 percent of the nation's harvest of Eastern Oysters. The Bay also supports an active shrimp, crab, and finfish industry, and serves as an important nursery area for many marine species. These, and other species, rely on the quantity, quality, and pattern of flows entering Florida, and altering that flow regime during certain times of the year can have significant adverse consequences to the productivity of the Apalachicola River and Apalachicola Bay. App. 32-33; 37-38.

These ecosystems fuel a vibrant economy and way of life in the Apalachicola Region. The Apalachicola Region supports a commercial fishery, innumerable recreational opportunities, and passive use values, like flood attenuation and water quality improvement. Moreover, generations of inhabitants have lived, worked, and prospered in this unique and culturally rich community. Florida seeks to protect all these diverse, irreplaceable, and varied interests.

II. GEORGIA'S UPSTREAM STORAGE AND CONSUMPTION HARM FLORIDA.

Georgia presently withdraws approximately 360 million gallons of water per day ("mgd") from the Chattahoochee River for municipal and industrial uses. Municipal uses include not only drinking water supplies but also such uses as car washing and lawn watering, among the major municipal consumptive

uses. Industrial uses include paper mills, recreational water parks, and golf courses. Substantial municipal and industrial uses in the metropolitan Atlanta area are extenuated by extraordinary losses in transmission, with so-called "lost or unaccounted for" water exceeding national standards. Georgia anticipates increasing its municipal and industrial withdrawals to 705 mgd by 2040. App. 7. Peak withdrawals, associated with watering lawns, car washing, golf courses, and parks, come when inflow needs are most critical to Florida – the dry summer months. Conservation efforts in Georgia have been minimal, even though it is the most cost-effective and readily available way to meet Georgia's growing demands.

Georgia also allows irrigators to withdraw water directly from the Flint River and its tributaries, as well as from groundwater that is hydrologically connected to those surface waters. These withdrawals are virtually unregulated in amount and duration, and only recently have been subjected to basic data collection and monitoring. According to official Georgia sources, Georgia presently allows 879 square miles to be irrigated with Flint River water. In addition, Georgia has already authorized an increase to its total irrigated lands in the Flint River Basin to more than 1,317 square miles – an area greater than the State of Rhode Island and roughly half the size of the entire Apalachicola Region. Georgia predicts that market trends will encourage farmers in southwest Georgia to increase the production of crop types, such as vegetables, that require the use of more irrigation

per acre than the principal crops (cotton, corn, and peanuts) currently grown in this area. Nevertheless, the marginal value of irrigation water in this region is minimal in most years given the already substantial rainfall the region receives.

In addition to these municipal, industrial, and agricultural uses, Georgia has authorized the construction of over 20,000 impoundments that intercept water and prevent it from reaching the Chattahoochee and Flint Rivers. These impoundments are often constructed on tributaries for recreational purposes such as boating, fishing, and wildlife. These impoundments directly reduce the flows ultimately entering the Apalachicola River by intercepting runoff water from precipitation in Georgia. Collectively, the effect of these impoundments can be substantial, with the flow reductions to the Apalachicola being most acutely felt during critical dry periods. *See Colorado v. Kansas*, 320 U.S. 383, 396-97 (1943) ("The 'critical matter' is when water is most needed"). Even so, Georgia continues to permit the construction of such impoundments.

Water storage and consumption in Georgia also affects how water is released to Florida from federal reservoirs on the Chattahoochee River. The Corps determines how much water to release from its reservoirs based, in part, upon calculated inflows to the ACF Basin. Georgia's storage and consumption reduces those inflows. As a result, as Georgia's uses increase, the calculated inflows to the ACF Basin decline, and even less water is released from the

Corps' reservoirs. The net result of Georgia's unmitigated water use is that less water reaches Florida due to both the hydrologic depletions and the Corps' operational protocols.

As developed further herein, the reduction in inflows as a result of this massive and unchecked storage and consumption in Georgia has already resulted in direct and irreparable harm to Florida. Oyster harvests have declined at a stunning rate and the Apalachicola Region has suffered a reduction in commercial fishery production, and a corresponding loss of jobs. Indeed, the oyster industry in Apalachicola Bay is now threatened with extinction. Commercial species harvested from the Apalachicola River and Bay provide the basis for jobs on the water and at processing facilities. There is also extensive recreational use of the Apalachicola River and Bay by residents of Florida and Georgia. Tourism and recreation-based industries rely directly upon the health of the River and Bay ecosystems – which are, in turn, reliant upon the amount and timing of fresh water entering the Apalachicola River from Georgia. Florida's economic interests in this apportionment are therefore profound.

Moreover, the full value of the Apalachicola Region lies not just in the monetary value of the economic interests. Indeed, a unique and rich community has evolved around the seafood and coastal industries in and around Franklin County. These socio-cultural interests cannot be replaced with other industries or mitigated through relocation. At stake,

therefore, is a way of life that has existed and prospered for generations. The very character and culture of the Apalachicola Region will be forever lost absent intervention by this Court.

III. ADJUDICATION OF FLORIDA'S CLAIM IS AN APPROPRIATE EXERCISE OF THIS COURT'S ORIGINAL AND EXCLUSIVE JURISDICTION.

This original action involves a dispute between two States over their respective rights to the flow of an interstate river system. The Court has original and exclusive jurisdiction over all controversies between such parties. *See* U.S. Const. art. III, § 2, cl. 2; 28 U.S.C. § 1251(a) (2011). *See also Mississippi v. Louisiana*, 506 U.S. 73, 77-78 (1992).

Although the Court exercises its original jurisdiction sparingly, the Court often has done so to resolve an intractable dispute with another State over rights pertaining to rivers or other bodies of water. Such cases are governed by federal common law and the doctrine of equitable apportionment. *See Colorado v. New Mexico*, 459 U.S. 176, 183 (1982) ("Equitable apportionment is the doctrine of federal common law that governs disputes between states concerning their rights to use the water of an interstate stream."); *see also Virginia v. Maryland*, 540 U.S. 56, 74 n.9 (2003) ("Federal common law governs interstate bodies of water, ensuring that the water is equitably apportioned between the States and that neither State

harms the other's interest in the river."). This Court crafted the doctrine of equitable apportionment to resolve disputes such as this one. *See Arizona v. California*, 373 U.S. 546, 597 (1963) ("The doctrine of equitable apportionment is a method of resolving water disputes between States. It was created by this Court in the exercise of its original jurisdiction over controversies in which States are parties.").

As the Court recognized more than a century ago, when "the action of one State reaches, through the agency of natural laws, into the territory of another State, the question of the extent and limitations of the rights of the two states becomes a matter of justiciable dispute between them." *Kansas v. Colorado*, 206 U.S. 46, 97-98 (1907).

Florida's claim against Georgia for equitable apportionment of the ACF Basin waters represents the kind of claim this Court has often used its original jurisdiction to resolve. *See Texas v. New Mexico*, 462 U.S. 554, 567 (1983) ("There is no doubt that this Court's jurisdiction to resolve controversies between two States extends to a properly framed suit to apportion the waters of an interstate stream between States through which it flows."); *Illinois v. City of Milwaukee*, 406 U.S. 91, 106 (1972) ("Equitable apportionment of the waters of an interstate stream has often been made under the head of our original jurisdiction."). Indeed, this Court has recognized its "serious responsibility to adjudicate cases where there are actual existing controversies over how interstate streams should be apportioned among

States." *Arizona v. California*, 373 U.S. at 564. What the Court observed in that case is no less true here:

> Unless many of the issues presented here are adjudicated, the conflicting claims of the parties will continue, as they do now, to raise serious doubts as to the extent of each State's right to appropriate water from the [river system at issue] for existing or new uses. In this situation, we should and do exercise our jurisdiction.

Id. See also Idaho v. Oregon, 462 U.S. 1017, 1031 n.1 (1983) (O'Connor, J., dissenting) (noting that "disputes over the waters of interstate streams" are "particularly appropriate for resolution by this Court in the exercise of its original jurisdiction").

For example, in *New Jersey v. New York*, 283 U.S. 336 (1931), New Jersey sought to enjoin New York State and New York City from executing a proposed diversion of water from the Delaware River and its tributaries. In support of its requested injunction, New Jersey "allege[d] that the proposed diversion will transgress its rights in many respects." *Id.* at 343. New Jersey contended, among other things, that the proposed diversion "will increase the salinity of the lower part of the River and of Delaware Bay to the injury of the oyster industry there," "will injure the shad fisheries," and "will injuriously affect the River for recreational purposes." *Id.* at 343-44. The Court appointed a Special Master who, after receiving "a great mass of evidence," found that the taking of 600 million gallons of water per day would "not materially

affect" the shad fisheries but that the effect of such withdrawals on the oyster fisheries and recreational uses would be "somewhat more serious." *Id.* at 343, 345. The Court confirmed the Master's finding that "[t]he total is found to be greater than New Jersey ought to bear, but the damage can be removed by reducing the draft of New York to 440 million gallons daily." *Id.* at 345.

The Court in *New Jersey v. New York* accordingly issued an injunction "to restrain the said State and City from diverting water in excess of that amount" (*i.e.*, 440 million gallons per day). *Id.* at 346. The Court's injunction also required the release of additional water in the event that the volume of flowing water fell below a certain point. It provided that, if at any time the flow of the Delaware River at Port Jervis, New York or Trenton, New Jersey fell below 1535 cfs, "water shall be released from one or more of the impounding reservoirs of New York City in sufficient volume to restore the flow at Port Jervis and Trenton." *Id.*

Likewise, Florida seeks injunctive relief to restrain Georgia from the inequitable diversion of waters from the ACF Basin. The long-running conflict between Florida and Georgia "has precipitated a clash of interests which between sovereign powers could be traditionally settled only by diplomacy or war. The original jurisdiction of this Court is one of the alternative methods provided by the Framers of our Constitution." *Nebraska v. Wyoming*, 325 U.S. 589, 608 (1945). Therefore, the history of this dispute

demonstrates the exercise of this Court's original jurisdiction is both appropriate and necessary.

A. Florida Presents A Strong Claim For Relief.

Florida has an undeniable right to an equitable share of waters that have historically flowed to it from the Chattahoochee and Flint Rivers. This Court's precedent makes clear Georgia may not store and consume the waters of the Chattahoochee and Flint Rivers in unlimited quantity heedless of the impact on the Apalachicola Region, Florida, and her citizens. A State simply "cannot divert all of the water it may need or can use simply because the river's headwaters lie within its borders." *Colorado v. New Mexico*, 459 U.S. at 191 (Burger, C.J., concurring) (citing *Wyoming v. Colorado*, 259 U.S. 419, 466 (1922)). *See also Idaho v. Oregon*, 462 U.S. 1017, 1025 (1983) ("[A] State may not preserve solely for its own inhabitants natural resources located within its borders.").

On the contrary, where, as here, a stream runs from one State to another, "the upper state on such a stream does not have such ownership or control of the waters flowing therein as entitles her to divert and use them regardless of any injury or prejudice to the rights of the lower state in the stream." *Wyoming v. Colorado*, 259 U.S. at 464. Thus, when it comes to the flow of water from the upper portions of the ACF Basin, Florida "has an equitable right to a fair distribution of this important resource." *Idaho v. Oregon*,

462 U.S. at 1025. Respecting Florida's rights to the flow of the Chattahoochee and Flint Rivers may leave Georgia with less water than it would like, but "States have an affirmative duty under the doctrine of equitable apportionment to take reasonable steps to conserve and even to augment the natural resources within their borders for the benefit of other States." *Idaho v. Oregon*, 462 U.S. at 1025. *See also Colorado v. New Mexico*, 459 U.S. at 185.

To obtain a decree from this Court equitably apportioning an interstate waterway, a State, after due proceedings, must demonstrate "some real and substantial injury or damage" or a "substantial likelihood of injury." *Idaho v. Oregon*, 462 U.S. at 1027, 1029. Florida alleges, and will establish, Georgia has caused, and left unchecked will continue to cause, direct, immediate and irreparable injury.

The federal government has recognized the ecological importance of the Apalachicola Region. As the U.S. Geological Survey stated in a recent report:

> The Apalachicola River is in one of the Nation's biodiversity hotspots, as recognized by the Nature Conservancy. More than 70 different species of trees grow in the Apalachicola River floodplain, which is the largest forested floodplain in Florida. . . . The ACF Basin has the highest species density of amphibians and reptiles on the continent north of Mexico, and the largest diversity of fish fauna among the Gulf Coast river drainages east of the Mississippi River. Sixteen fish

> species have been listed for protection by Federal or State agencies.

UNITED STATES GEOLOGICAL SURVEY, WATER-LEVEL DECLINE IN THE APALACHICOLA RIVER, FLORIDA, FROM 1954 TO 2004, AND EFFECTS ON FLOODPLAIN HABITATS, SCIENTIFIC INVESTIGATIONS REPORT 2006-5173, at 7 (2006) (citations omitted) ("USGS 2006 Report").

Among the species that inhabit the Apalachicola Region are several that are threatened or endangered. *See, e.g., Alabama v. U.S. Army Corps of Eng'rs*, 441 F. Supp. 2d 1123, 1125 (N.D. Ala. 2006) (noting that "[f]our federally-listed threatened and endangered species are present in the Apalachicola River downstream from Woodruff Dam: the threatened Gulf sturgeon, the threatened fat threeridge mussel, the endangered purple bankclimber mussel, and the threatened Chipola slabshell mussel.") (footnotes omitted).

Georgia's existing and projected uses of water in the Chattahoochee River Basin are catalogued in materials submitted to the Corps by Georgia's Governor Nathan Deal. Those materials include a sworn affidavit from the Director of the Georgia Environmental Protection Division, Judson H. Turner, stating that in 2011, Georgia users diverted 360.9 million gallons per day. App. 6. Mr. Turner explained that Georgia's water diversion from the Chattahoochee River, "will equal or exceed 705 mgd by 2040, if not a few years sooner." App. 7. *See Idaho v. Oregon*, 462 U.S. at 1026 ("Reliance on reasonable predictions

of future conditions is necessary to protect the equitable rights of a State."). In addition to these municipal and industrial uses, Georgia also has constructed and continues to allow the construction of numerous small reservoirs throughout the Chattahoochee River Basin. Cumulatively, these reservoirs impound runoff water that would otherwise flow into the Chattahoochee River and down to Florida

Georgia also uses an enormous amount of water from the Flint River Basin. Telling facts and statistics are supplied by Georgia itself in a state government report. *See* GEORGIA DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL PROTECTION DIVISION, FLINT RIVER BASIN REGIONAL DEVELOPMENT AND CONSERVATION PLAN (2006) ("FLINT RIVER BASIN PLAN"), available online at www1.gadnr.org/frbp/Assets/Documents/Plan22.pdf. Most of the water used in the Flint River Basin is used for the purpose of agricultural irrigation. *Id.* at 37 ("Water use in the Flint River Basin (FRB) is dominated by agricultural irrigation."); *id.* at 14 ("agricultural irrigation uses the largest volume of water in the FRB"). Nearly 40 percent of the harvested cropland in the Flint River Basin is irrigated. *Id.* at 151. "Overall, a total of approximately 160,000 acres are irrigated from surface-water throughout the Flint River Basin and approximately 403,000 acres from Floridan aquifer wells in Subarea 4." *Id.* at 15. "Not coincidentally, this [irrigation] corresponds with the hottest and/or driest parts of the year when evapotranspiration is highest, and streams and ground-water levels are approaching their seasonally

lowest levels." *Id.* at 21, 88. *Id.* at 21 ("[I]rrigation usage typically reaches a maximum in June, July, or August."). Cotton, peanuts, and corn account for 76 percent of irrigated acres in the Flint River Basin. *See id.* at 80. "However, changing market trends are favoring an increase in vegetable and green industry production that require more water per acre than the more common crops." *Id.* at 44.

Georgia's use of water from the Flint River Basin for irrigation purposes has an impact on the amount of water flowing in the Flint River and on to the Apalachicola River. *See id.* at 15 ("These withdrawals reduce streamflow, and can degrade aquatic habitat in the lower FRB."); *id.* at 22 ("Since extensive development of irrigation in the lower Flint River Basin, drought-year low flows are reached sooner and are lower than before irrigation became widespread."); *id.* (recognizing "the clear[] evidence that agricultural irrigation compounds the effect of climatic drought on stream flow in the Basin"). The federal government has reached the same conclusion. *See* USGS 2006 REPORT at 43 ("Several studies have documented a strong connection between ground-water withdrawals [for irrigation] and reduced streamflow in the lower Flint River basin."); FWS OPINION at 86 ("Water use in Alabama and Georgia affects basin inflow to Woodruff Dam.").

Florida's experts have concluded Georgia's storage and consumption of water from the Chattahoochee and Flint Rivers has already caused harm of a

serious magnitude to Florida's interests. Professor J. David Allan explains:

> Ecosystems of the Apalachicola River have already suffered harm of a serious magnitude as a result of deviations in the natural flow regime. The construction of upstream dams, land use practices, and withdrawals of water, such as for irrigation in Georgia, have altered the natural flow regime of the Apalachicola River. Alteration of the natural flow regime has harmed at least three species, now federally listed as threatened or endangered under the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531 *et seq*. Stresses associated with artificially diminished flows and river stage have negatively affected other aspects of aquatic habitat in the Apalachicola Basin, especially those that occur during low flow periods during spring, summer and fall.

App. 32-33.

In 2012, Florida experienced the lowest average annual flow of the Apalachicola River in the 90-year period of record at the U.S. Geological Survey stream gage at Chattahoochee, Florida (immediately below Woodruff Dam). The average annual flow in 2012 was 65 percent lower than the average annual flow for 1923-2012. This record low flow year followed the fourth lowest flow on record in 2011, resulting in an exceptionally low two-year period that was extremely harmful to species and habitats throughout the Apalachicola River, floodplain, and Bay. The low flows reduced available habitats in the Apalachicola River

and thrust salinity levels in Apalachicola Bay above tolerable levels. Oyster landings in 2012 were the lowest in the last 20 years in Apalachicola Bay. The surrounding economy suffered severe contraction which continued into 2013. This situation resulted in the U.S. Department of Commerce declaring a commercial fishery failure due to fishery resource disaster under Section 312 of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and Section 308(b) of the Interjurisdictional Fisheries Act (IFA).

Moreover, further depletions will result in additional severe and irreparable harm to the ecology and economy of the downstream Apalachicola Region. As Professor Paul Montagna explains:

> Flows to the Apalachicola River will be further depleted by anticipated future upstream consumption. When this occurs, the frequency, duration and intensity of already extant adverse impacts will increase in Apalachicola Bay. Reduced river flows will further reduce the amount of nutrients and sediments flowing into the Apalachicola Bay and create even higher salinity levels. Reduced nutrient inputs and higher salinity levels will reduce estuarine productivity, alter the historical community structure of the bay, and will prove harmful to all estuarine dependent species, but particularly those fixed to the bottom, such as oysters. As a result, oyster production will continue to decline to the point of extirpation.

App. 38.

The harms Florida alleges – including harm to wildlife, habitat, threatened and endangered species, commercial operations, and recreational activities – are the same sorts of harms that other States have raised in equitable apportionment litigation. In *Nebraska v. Wyoming*, 515 U.S. 1 (1995), Nebraska sought to modify a 1945 decree equitably apportioning the North Platte River so as to enjoin certain water projects proposed by Wyoming that would deplete the river's flow and thereby harm endangered species. Wyoming objected to the Special Master's decision to allow Nebraska to present "evidence of injury not only to downstream irrigators, but also to wildlife and wildlife habitat." 515 U.S. at 12. But this Court overruled the objection, explaining that "we do not understand how we can preclude [Nebraska] from setting forth that evidence of environmental injury, or consign it to producing that evidence in some other forum, since this is the only Court in which Nebraska can challenge the Wyoming projects." *Id.* at 12-13. *See also Idaho v. Oregon*, 462 U.S. 1017 (1983) (suit for equitable apportionment of Chinook salmon and steelhead trout in the Columbia-Snake River system); *New Jersey v. New York*, 283 U.S. at 343 (enjoining New York's proposed diversion of Delaware River water above a certain amount due to effect on New Jersey's oyster industry and recreational uses of the river).

The situation is dire and the need for relief immediate. This action, therefore, seeks to arrest ongoing harm and to prevent future harm. *See Idaho*

v. Oregon, 462 U.S. at 1028 ("Equitable apportionment is directed at ameliorating present harm *and preventing future injuries to the complaining States*") (emphasis added). *See also Nebraska v. Wyoming*, 325 U.S. at 599 (noting that Nebraska based its case in part on "threats of more serious shortage and diversions in the future").

B. The Dispute Is Intractable.

In deciding whether a case is appropriate for the Court's original jurisdiction, the Court looks to "the availability of an alternative forum in which the issue tendered can be resolved." *Mississippi v. Louisiana*, 506 U.S. 73, 77 (1992). Moreover, while confirming its jurisdiction over suits between States over water rights, the Court has commented that "litigation of such disputes is obviously a poor alternative to negotiation between the interested States." *Texas v. New Mexico*, 462 U.S. at 567 n.13. In this case, neither litigation in alternate forums nor negotiation between the interested States offer any path to resolution. Prior litigation could never address the fundamental problem of Georgia's unrelenting storage and consumption. Prior negotiations, although extensive and spanning the more than two decades immediately preceding this filing, have failed. This intractable dispute is now presented to this Court, the only forum authorized and able to equitably apportion the waters.

From 1990 through 2012, operation of the Corps reservoirs, and in particular the operation of Buford Dam, which creates Lake Sidney Lanier, was the focus of intense, multi-state, and multi-jurisdiction litigation culminating in two decisions of the Circuit Courts of Appeals. *Se. Fed. Power Customers, Inc. v. Geren*, 514 F.3d 1316 (D.C. Cir. 2008); *In re MDL-1824 Tri-State Water Rights Litig.*, 644 F.3d 1160 (11th Cir. 2011). Due to the jurisdictional limits of the lower courts, the prior litigation could not address the fundamental issue Florida seeks to resolve in this Court: upstream storage and consumption in Georgia and resulting depletions to the Apalachicola Region.

The questions presented in the lower court litigation related to the Corps' legal obligations under various federal statutes (including the ESA, the Flood Control Act of 1944, the NEPA, the Rivers and Harbors Act of 1899, and the Water Supply Act of 1958) with respect to the Corps' operation of dams along the Chattahoochee River. Thus, the lower court litigation concerned the statutory duties of the Corps rather than the federal common law rights of the three States with respect to their equitable share of the waters of the ACF Basin. *See Alabama v. U.S. Army Corps of Eng'rs*, 424 F.3d at 1130 ("Contrary to Georgia's assertion, Alabama and Florida are not attempting to litigate their right to a certain amount of the water in the ACF basin. Rather, Alabama and Florida seek to ensure the Corps' compliance with federal law governing the management of projects in the ACF Basin, particularly Lake Lanier."). Nor did the lower

court litigation address water use in the Flint River Basin, where there are no federal facilities.

Extensive negotiations have likewise failed to yield any resolution. As early as January 3, 1992, the States entered into a Memorandum of Agreement ("MOA"), the purpose of which was to commit themselves "to a process for cooperative management and development of regional water resources" and to engage in what was known as the "Comprehensive Study." The Comprehensive Study was initiated pursuant to the States' efforts to settle litigation initiated by the State of Alabama. The Comprehensive Study led then to the Apalachicola-Chattahoochee-Flint River Basin Compact, Pub. L. No. 105-104, 111 Stat. 2219 (1997) ("ACF Compact").

Florida and Georgia, along with Alabama, ratified the ACF Compact in 1997, which incorporated certain terms of the 1992 MOA. Among those terms was Article VI(c), designed to prevent any State from acquiring any rights during the negotiation period or thereafter in the absence of an agreement. Specifically, the ACF Compact recognized that, although storage and upstream consumptive uses could continue to increase as negotiations continued, those uses would not become "permanent, vested or perpetual rights to the amounts of water used between January 3, 1992 [the date of the MOU] and the date on which the [ACF Compact] Commission adopts an allocation formula." ACF Compact, Art. VI(c). The parties to the ACF Compact intended to develop an allocation formula to equitably apportion the waters of the ACF

Basin among the three States while protecting the water quality, ecology, and biodiversity of the Apalachicola Region. Although the ACF Compact was initially set to terminate at the end of 1998, the States extended the termination date several times in hopes of obtaining an apportionment agreement.

Although it was once foreseen as the legal vehicle to share the waters of the ACF Basin, the ACF Compact failed when Georgia secretly abandoned the process and attempted to meet its needs without regard to its sister States through settlement of the *Southeastern Federal Power Customers* litigation. *Alabama v. U.S. Army Corps of Eng'rs*, 357 F. Supp. 2d 1313, 1318 (N.D. Ala. 2005), vacated and remanded by *Alabama v. U.S. Army Corps of Eng'rs*, 424 F.3d 1117 (11th Cir. 2008) (discussing Corps' and Georgia's failure to deal with Florida and Alabama in good faith). Given Georgia's bad faith actions, which led directly to the termination of the ACF Compact ten years ago, there is no further prospect of a compact-based solution. *Cf. Nebraska v. Wyoming*, 325 U.S. at 608 (denying motion to dismiss and stating: "A genuine controversy exists. The States have not been able to settle their differences by compact.").

Moreover, from 2003 up to and including this year, the three States have made numerous attempts to resolve this dispute through formal and informal discussions, as well as court-sponsored mediation (including sessions facilitated by the U.S. Secretary of the Interior and the Council on Environmental Quality). *See, e.g.*, Joint Motion for Order Regarding

Confidentiality of Settlement Negotiations, *In re Tri-State Water Rights Litigation* (No. 315). The current and past Governors of the three States have met personally, as well, in furtherance of developing a negotiated resolution. Unfortunately, all such efforts have failed. Only this Court can provide the relief Florida seeks: an equitable apportionment of the waters of the ACF Basin and a decree enforceable against Georgia.

CONCLUSION

As set forth above, Florida has established (1) there is an actual dispute between sovereign states over the apportionment of interstate waters, (2) the actions of Georgia have caused and will continue to cause direct, immediate, and irreparable harm to Florida, and (3) no other forum or means exist for resolving this dispute. Florida submits respectfully, therefore, that the Court grant the motion for leave to file a complaint and adjudicate Florida's claim against Georgia for an equitable apportionment of the waters of the ACF Basin.

Respectfully submitted,

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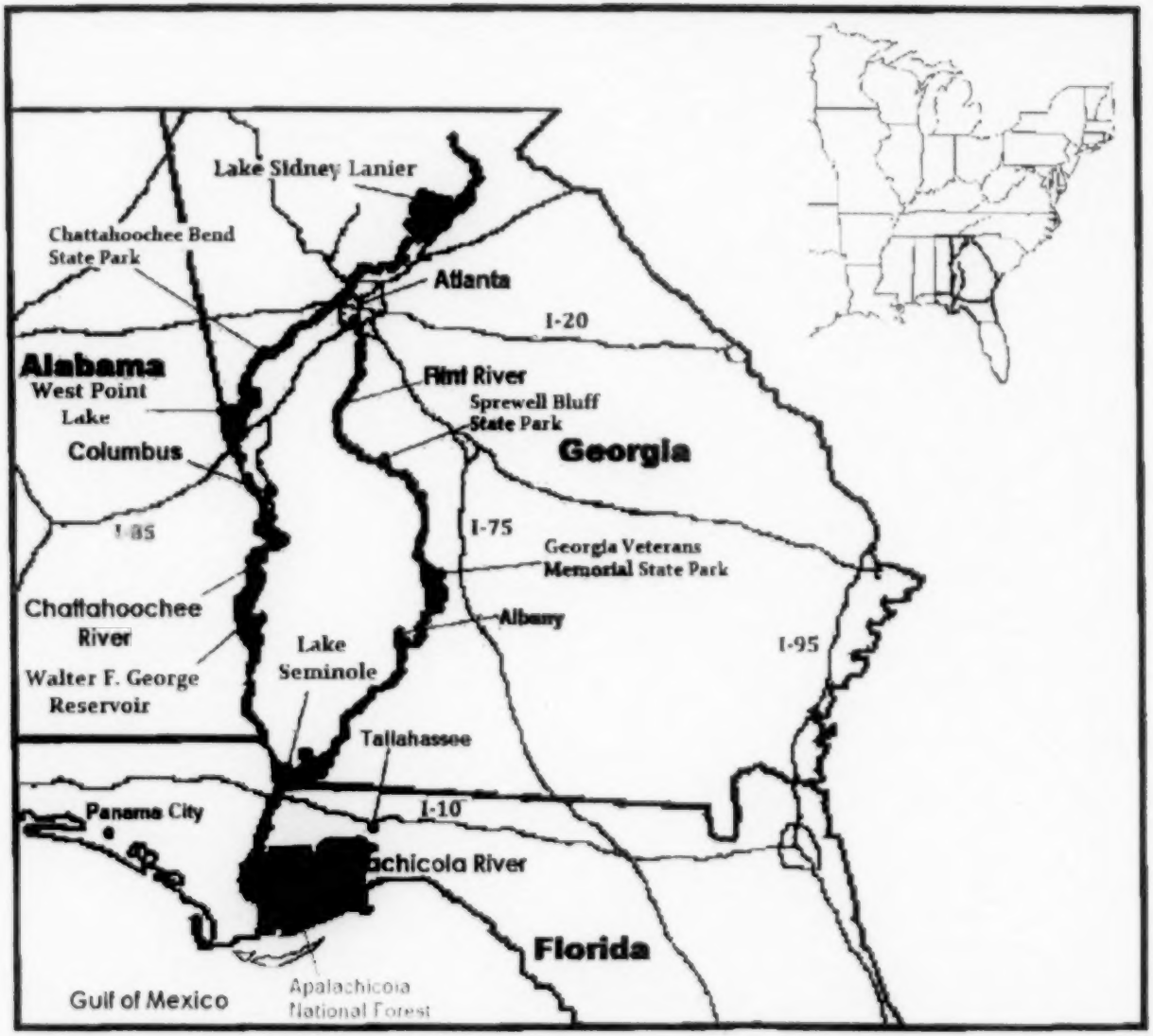
Lake Sidney Lanier
Chattahoochee Bend State Park
Atlanta
I-20
Alabama
West Point Lake
Columbus
Flint River
Sprewell Bluff State Park
Georgia
I-85
I-75
Georgia Veterans Memorial State Park
Chattahoochee River
Walter F. George Reservoir
Lake Seminole
Albany
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Tallahassee
Panama City
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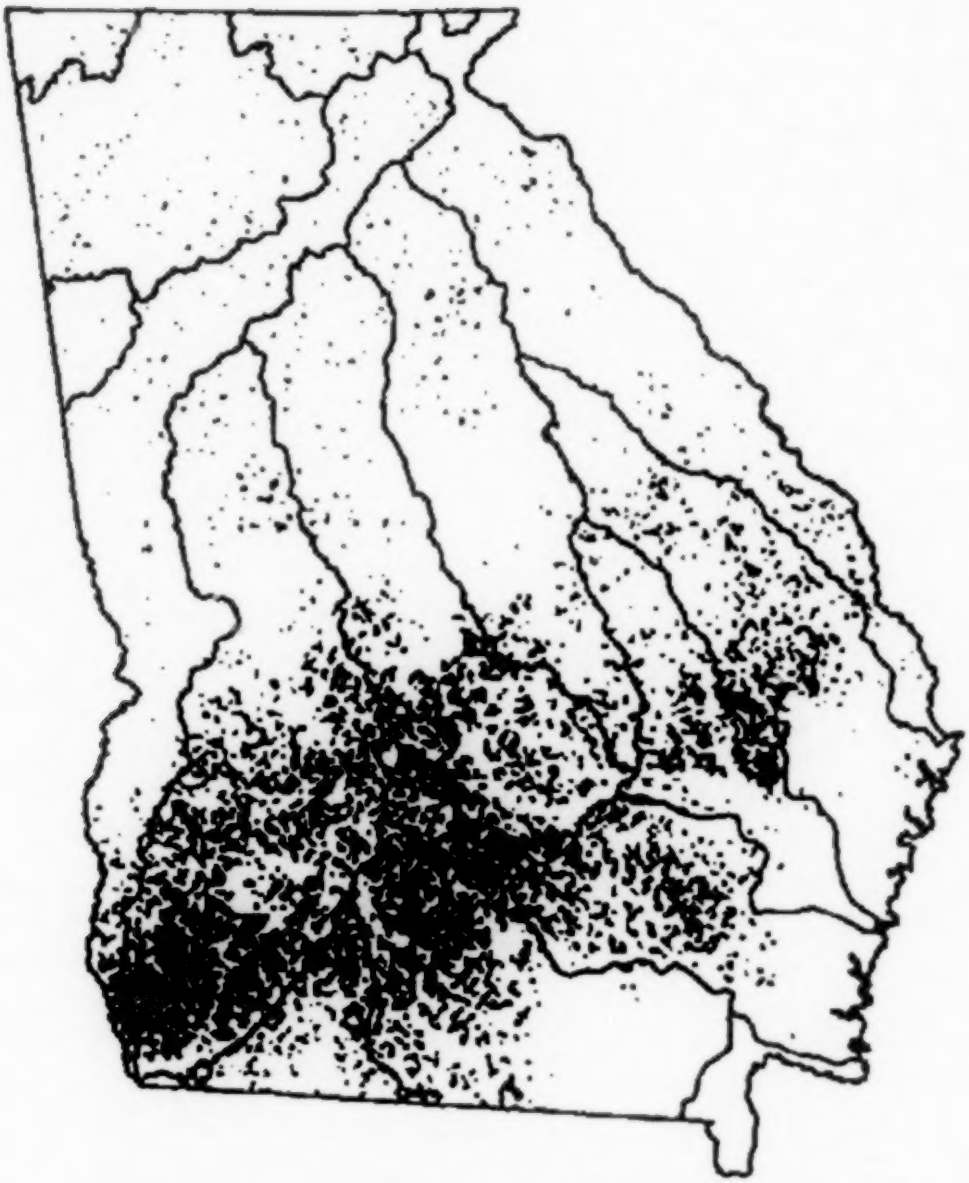
Gulf of Mexico
Apalachicola National Forest



Permitted Withdrawals for Irrigation within the State of Georgia
Source: Georgia DNR EPD

- Groundwater Sources
- Surface Water Sources
- ☐ River Basins

Affidavit of Judson H. Turner

1. My name is Judson H. Turner. I am Director of the Georgia Environmental Protection Division ("EPD") of the Georgia Department of Natural Resources.

2. In May 2000, the State of Georgia submitted to the Assistant Secretary of the Army for Civil Works a request for reallocation of storage in the Lake Lanier conservation pool to provide sufficient water supplies to meet future municipal and industrial water supply needs of 705 million gallons per day (mgd). In support of that request, Georgia provided an Affidavit from then-EPD Director Harold Reheis discussing Metropolitan Atlanta's then-current and projected water supply needs and why Georgia needed a reallocation of storage in Lake Lanier to meet those needs. Georgia's water supply request remains pending with the Corps. The purpose of this Affidavit is to provide updated data and information that are relevant to that request.

3. The State of Georgia is responsible for managing the quantity and quality of the waters of the State for public and private water supply, and for agricultural, industrial, and recreational uses, while protecting the environment and human health. Georgia law provides that "the government of the state shall assume responsibility for the quality and quantity of such water resources and the establishment and maintenance of a water quality and water quantity control program adequate for present needs and designed to

care for the future needs of the state." O.C.G.A. § 12-5-21(a).

4. EPD is the state agency to which state law delegates the responsibility for regulating withdrawals of water from, and discharges of pollutants into, the surface waters of the State. To fulfill this responsibility, EPD maintains data on the population of counties and municipalities within the State, and projections of the State's future population growth and water needs. EPD's expertise in hydrologic and water quality modeling allows it to assess the impact of water withdrawals and wastewater returns. EPD prioritizes water needs and evaluates alternatives for meeting these needs from the State's finite water resources.

GEORGIA'S NEED FOR WATER SUPPLY FROM LAKE LANIER

Current Population and Projections for Future Growth

5. More than 3.3 million Georgians currently rely upon withdrawals of water directly from Lake Lanier or withdrawals of water that the Corps releases from Lake Lanier to the Chattahoochee River to meet their water supply needs. Attached as Appendix 1 is a table that identifies the counties within which municipal and industrial water use customers are dependent in whole or in part on withdrawals and releases from Lake Lanier for their water supply.

6. Also shown in Appendix 1 are projected populations of the counties that will depend on significant amounts of water from Lake Lanier in the future. EPD projects that the number of Georgians who depend upon Lake Lanier for water supply will rise to more than 6 million by around 2040. The numbers in Appendix 1 come from the last published projections of the Georgia Office of Planning and Budget ("OPB"). EPD also reviewed the last published projections generated by the Metropolitan North Georgia Water Planning District (the "Metro Water District").

7. Municipal water systems in six counties within the Chattahoochee River watershed above the confluence with Peachtree Creek currently withdraw water from the Lake Lanier/Chattahoochee River system. EPD projects that water systems in four additional counties that are riparian or tributary to Lake Lanier will depend upon withdrawals from Lake Lanier in the future. In addition, the following other counties rely on Lake Lanier for water supply: Bartow, Cherokee, Clayton, Douglas, Fayette, Henry, Paulding, Rockdale, and Walton.

8. Counties that rely on Lake Lanier for water supply comprise the majority of the population for the Atlanta Metropolitan Statistical Area ("MSA"), which, according to the U.S. Census Bureau, is the ninth largest MSA by population in the United States. From 2000 to 2010, the Atlanta MSA grew by 24%, a growth rate exceeded by only two other MSA's in the United States. Two counties in the Atlanta MSA (Forsyth and Paulding) were among the 10 fastest

growing counties in the United States during this period, both growing at rates greater than 74% for the decade. Gwinnett County added almost 217,000 persons to its population over the decade; for the same period, only 16 counties in the United States added more people.

Municipal and Industrial Water Supply Needs

9. Attached as Appendix 2 and Appendix 3 are the 2011 statistics for water withdrawals by the permit holders who rely upon the Lake Lanier/Chattahoochee River system. The average rate of water withdrawn directly from Lake Lanier in 2011 was 115.2 mgd. *See* Appendix 2. The annual average rate of water withdrawn from the Chattahoochee River between Buford Dam and Peachtree Creek was 245.7 mgd. *See* Appendix 3.

10. Appendix 4 shows projected withdrawals from Lake Lanier and the Chattahoochee River above the confluence with Peachtree Creek for the year 2040. EPD developed its forecasts for future water supply need projections in cooperation with the Metro Water District. These forecasts are based on a number of factors, including population, employment, and commercial and residential consumption rates.

11. EPD and the Metro Water District project that the nine local water systems that currently withdraw water from Lake Lanier or the Chattahoochee River above the confluence with Peachtree Creek will continue to do so. These systems are: City of

Gainesville, City of Buford, Gwinnett County Water and Sewerage Authority, Forsyth County, City of Cumming, Atlanta-Fulton Water Resources Commission, DeKalb County Public Works (Water and Sewer), Cobb County Marietta Water Authority, and City of Atlanta.

12. Of these, five systems – City of Gainesville, City of Buford, Gwinnett County Water and Sewerage Authority, Forsyth County, and City of Cumming – withdraw from Lake Lanier. The other four facilities – Atlanta-Fulton Water Resources Commission, DeKalb County Public Works (Water and Sewer), Cobb County Marietta Water Authority, and City of Atlanta – withdraw from the Chattahoochee River upstream of the Peachtree Creek confluence. In addition, EPD projects that Habersham, White, Lumpkin, and Dawson Counties in the future will need to withdraw approximately 41 mgd from Lake Lanier by 2040.

13. The Metro Water District's most recent Water Supply & Conservation Management Plan includes projections for municipal and industrial water supply needs for 2035 and 2050. Based on these projections, adding the 41 mgd of withdrawals by Habersham, White, Lumpkin, and Dawson Counties, and assuming that growth in water usage between 2035 and 2050 will be roughly linear, water supply needs that are dependent on withdrawals and special releases from Lake Lanier will meet or exceed 705 mgd on an annual average basis by 2040. This includes direct withdrawals from Lake Lanier of 297 mgd and

withdrawals of 408 mgd from the Chattahoochee River below Buford Dam and above the confluence of the Chattahoochee River and Peachtree Creek.

14. Note that in calculating its water supply projections, the Metro Water District used a population growth rate for the region that is lower than the rate of growth that OPB has projected. Taking into account differing population projections and other variables affecting demand, EPD projects that municipal and industrial water supply demands that are dependent upon withdrawals and special releases from Lake Lanier will reach 705 mgd (including 297 mgd lake withdrawals and 408 mgd river withdrawals) sometime between 2035 and 2045. It is reasonable to plan using the assumption that Georgia's water supply needs will be at least 705 mgd by 2040.

15. In light of Georgia's projections that its water supply needs from Lake Lanier will equal or exceed 705 mgd by 2040, if not a few years sooner, Georgia's request of the Corps is unchanged from what was requested in 2000: that the Corps operate Lanier to accommodate withdrawals of up to 297 mgd annual average from Lake Lanier and 408 mgd annual average from the Chattahoochee River between Buford Dam and the confluence with Peachtree Creek.

16. Georgia plans to help meet demands from Lake Lanier with water that will be stored in the proposed Glades Reservoir upstream of Lake Lanier on Flat Creek, released to Flat Creek, and will flow into Lake

Lanier to be withdrawn from one or several of the intakes in Lake Lanier. The Glades Reservoir currently is in the permitting process. Based on reasonable assumptions regarding operation of Glades Reservoir, EPD projects a 30-40 mgd yield from Glades Reservoir. EPD plans to work with the Corps and the reservoir sponsors to ensure that the Glades Reservoir serves as a net benefit to the system yield, provided that the Corps will be able to meet water supply needs of 705 mgd from Lake Lanier. Because the 30-40 mgd released from Glades Reservoir will be withdrawn from Lake Lanier at the same rate that it enters Lake Lanier, no storage should be required for the withdrawal of that water.

Water Conservation

17. The per capita water use rate in the Metropolitan Atlanta Region has fallen in recent years, and the projected demand the region assumes that per capita water use within the region will continue to fall. The use rate is currently 148 gallons per capita per day (gpcd), and is expected to decline to 135 gpcd by the 2035-2040 timeframe. The decline in per capita water use has and is expected to continue to result from implementation of aggressive state and local water conservation policies, explained in greater detail below. Note that per capita water use and total population are among the factors, but are not the only factors, used to calculated total projected water use in the areas that are to be supplied by withdrawals and releases from Lake Lanier.

18. In 2001, the Georgia General Assembly created the Metro Water District and charged it with developing and maintaining comprehensive long-term plans for water supply and conservation, wastewater management, and watershed management for metro Atlanta. The Metro Water District is comprised of 15 counties, 92 cities, and 56 water supply systems. The plans are implemented by local water systems and local governments and are enforced by the State of Georgia through water permits and through eligibility for grants and loans. The Metro Water District completed development of its initial set of plans in September 2003. The governments within the Metro Water District spent the ensuing five years implementing the plans. In 2009, the Metro Water District adopted the first major update of its plans largely based upon lessons learned during the 2004-2009 implementation period.

19. Water conservation is an important element of the Metro Water District's Water Supply and Water Conservation Plan. The water conservation measures in the Plan are the most aggressive in Georgia and among the most aggressive in the United States. The 2003 Plan, as amended, included ten conservation measures applicable to all water systems and/or local governments. The 2009 update retained all and strengthened three of those measures. The Water Supply and Water Conservation Plan was again amended in December 2010 and added seven measures – two measures applicable throughout the District and five that apply to water systems that

withdraw from Lake Lanier or the Chattahoochee River (denoted with asterisk). The water conservation measures in the Metro Water District Plan include: 1) conservation pricing; 2) replace older, inefficient plumbing fixtures; 3) pre-rinse spray valve retrofit education; 4) rain sensor shut-offs on new irrigation systems; 5) sub-unit meters in new multifamily buildings; 6) assess water losses with IWA/AWWA water audit methodology and develop programs to reduce systems water loss; 7) residential water audits; 8) low-flow retrofit kits for residential; 9) commercial water audits; 10) education and public awareness activities; 11) high-efficiency toilets and urinals in government buildings; 12) new car washes to recycle water; 13) expedited water loss reduction*; 14) multi-family HET rebates*; 15) meters with point of use leak detection*; 16) private fire lines to be metered*; 17) maintain a water conservation program*; 18) water waste policy or ordinance; and 19) HET plumbing fixtures in new construction consistent with state legislation.

20. The Metro Water District has made water conservation a priority, and local water systems have shown a strong record of implementation of water conservation measures. In annual progress surveys, the District has found: that tiered water conservation rates are in place throughout the metro area; that water systems serving 96% of the population offer toilet rebates, and over 76,872 older toilets have been replaced since 2008; that the larger systems have implemented programs to reduce system water losses,

and, in 2010, over 10,000 leaks were repaired; and 98% of the population of the metro area is targeted with educational and outreach programs by local governments.

21. In 2010, the Georgia Water Stewardship Act was passed by the Georgia General Assembly and signed by Governor Sonny Perdue. For those water users relying on Lake Lanier and the Chattahoochee River above Peachtree Creek, the Water Stewardship Act amplified and supplemented the 19 water conservation policies and programs identified in the Metro Water District's water supply and conservation plan. Among the Act's provisions that supplement the Metro Water District's demand management initiatives are: 1) requiring state government agencies to examine their programs, practices, and rules to identify opportunities to provide for voluntary water conservation; 2) requiring local governments to include water conservation measures in local comprehensive plans; 3) incentives for public water systems to use full cost accounting; and 4) technical assistance to local governments and public water systems for water loss abatement activities.

22. In 2012, EPD conducted an evaluation of the 2000-2010 rates of growth in water demand compared to rates of population growth in the counties with the 15 largest municipal surface water systems in Georgia. Six of the 15 largest municipal surface water systems are located in five counties (i.e., Fulton, DeKalb, Cobb, Gwinnett, and Hall) that rely upon withdrawals or water supply releases from Lake

Lanier. The evaluation showed that water use in each of the five counties demonstrated a consistent decreasing trend over the decade, while population in each of those counties increased over the decade. Trends such as these in the five counties and beyond clearly indicate that the water conservation initiatives being implemented in the Atlanta region by the Metro Water District are significantly reducing per capita water demand.

Crediting of Return Flows

23. EPD projects that returns of treated wastewater to Lake Lanier and tributaries immediately upstream of Lake Lanier will mitigate the effect of withdrawals from Lake Lanier. EPD projects that the average annual return of treated wastewater to Lake Lanier and its tributaries in 2040 (assuming withdrawals of 297 mgd) will be approximately 165 mgd. *See* Appendix 4. The net withdrawal from Lake Lanier is therefore expected to be 132 mgd (297 mgd minus 165 mgd).

24. The State of Georgia will allocate the treated wastewater returned to Lake Lanier and its tributaries to particular users of water supply storage in Lake Lanier. This should increase the yield of the storage account or accounts to which the wastewater return is credited rather than count the same as natural inflows, which increase the yield of a water supply storage account only according to the percentage of total conservation storage owned by that user.

25. I am aware of no legal or legitimate policy reason why the Corps should not credit metered return flows to Lake Lanier or its tributaries exclusively to individual water supply storage accounts to which the State of Georgia has allocated such returns.

26. In accordance with federal law, the Corps has long recognized that it is the State, not the Corps, that determines and allocates water rights, and that the Corps should defer to the State's allocation of water rights. Allocation of wastewater return flows to individual users also is a matter of water rights that is best determined by the State.

27. The return of highly-treated wastewater to an existing reservoir increases the yield of that reservoir by reducing the net withdrawals. As a result, return flows keep reservoir levels higher and mitigate the impact of water supply withdrawals. Return flows to a water supply reservoir are a form of water reuse that Georgia's statewide water plan favors.

28. EPD-permitted discharges from wastewater treatment plants are a function of water use and not rainfall and runoff, and therefore are more consistent and reliable than natural inflows. Because they are metered and reported to EPD, wastewater discharges also are easily monitored and accounted for, ensuring that a user would not obtain credit for any returns than do not actually occur.

29. It is more expensive for local wastewater utilities to discharge wastewater to Lake Lanier than to

the Chattahoochee River or its tributaries, because they must treat the wastewater to a higher degree to meet applicable water quality standards. To make it worthwhile for these utilities to return wastewater to Lake Lanier, there must be policies in place that incentivize those returns. Therefore, EPD desires to credit to individual water users the exclusive right to withdraw or store the wastewater returns that are made. The Corps should do the same, or should defer to the State's allocation.

30. Thus, consistent with federal law and good policy, in determining the yield of the storage space that is held by or for a water supply user, the Corps should count exclusively to that user's storage space such returns as the State has allocated to that user.

Net Municipal and Industrial Water Consumption

31. A large portion of the metro Atlanta area's treated wastewater is returned to the Chattahoochee River downstream of Buford Dam and upstream of the United States Geological Survey ("USGS") gaging station at Whitesburg, Georgia. In 2011, an annual average of 34.4 mgd of treated wastewater was discharged to the Chattahoochee River between Buford Dam and the Peachtree Creek confluence, and an annual average of 184.2 mgd of treated wastewater was discharged to the Chattahoochee River between the Peachtree Creek confluence and the USGS Whitesburg gage. EPD projects that by 2040 (or as of the date when water withdrawals reach 705 mgd),

the amount of treated wastewater discharged to the Chattahoochee River between Buford Dam and the Whitesburg gage will be 385 mgd on an annual basis, including 94 mgd discharged to the reach between Buford Dam and the Peachtree Creek confluence, and 291 mgd to the reach between the Peachtree Creek confluence and the USGS Whitesburg gage. When combined with return flow directly into Lake Lanier, the total return of wastewater associated with the withdrawal of 705 mgd is projected to be 550 mgd, or 78% of the total withdrawal.

32. Therefore, Georgia projects that as of 2040, the total consumptive use from municipal and industrial water supply from Lake Lanier and from the Chattahoochee River above the Whitesburg gage will be approximately 155 mgd, or 239 cfs, on an annual average basis. To put this amount into perspective, it is a mere 1.1% of the 21,587 cfs annual average daily flow of the Apalachicola River just downstream of the Georgia-Florida state line.

In-Stream Demands for Water Quality

33. Metropolitan Atlanta local governments that discharge treated wastewater to the Chattahoochee River also rely upon releases from Lake Lanier to provide consistent flows in the river to assimilate those discharges.

34. EPD has developed a mathematical model, known as the Chattahoochee River Model, to simulate temperature, dissolved oxygen, and the concentrations

of individual pollutants (biochemical oxygen demand, organic nitrogen, ammonia, nitrate, organic phosphorus, and ortho phosphate) under different flow, intake, discharge, and meteorological conditions.

35. Based on conditions that existed at the time of Georgia's 2000 water supply request, EPD determined that certain seasonally-varying flows in the Chattahoochee River at the confluence with Peachtree Creek would be needed to meet water quality standards. Thanks to improvements in wastewater treatment since 2000, the Chattahoochee River Model now shows the flows needed to assimilate wastewater in the Chattahoochee River and maintain water quality standards may be reduced.

Why Assurance of Long-Term Supply is Needed Now

36. If Lake Lanier were not available to satisfy the needs included in Georgia's water supply request, additional reservoirs and water resource projects would be needed to replace it. Due to the complexity and uncertainty associated with the permitting processes, planning for the development of new water supply reservoirs must generally begin 15 to 25 years, or even more, before there is a demand for the water.

37. The three major stages of the planning processes are 1) alternatives analysis and source evaluation; 2) detailed engineering and environmental studies; and, 3) state and federal permitting. The first stage includes forecasting future service area population and

water demands; evaluating demand management and supply alternatives for meeting the demands; evaluation of source water capacity, quality, and reliability; and development of environmental, historic/archeological, and socio-economic assessments of impacts. In the second stage, detailed engineering and environmental studies must be conducted on the preferred alternatives, and funding sources must be identified and secured. In the third stage, if a new or expanded water supply reservoir is the preferred alternative, the applicant must apply for and secure a Federal Clean Water Act Section 404 permit (issued by the Corps of Engineers), a Clean Water Act Section 401 Water Quality Certification (issued by the State of Georgia), a Safe Dams permit and a water withdrawal permit (both issued by the State of Georgia), and a Safe Drinking Water Act Permit (also issued by the State of Georgia). Before the Corps of Engineers can issue a Section 404 permit, it must comply with provisions of the National Environmental Policy Act (i.e., prepare an Environmental Assessment and possibly an Environmental Impact Statement) and federal regulations. Of all the stages, the Section 404 permitting process generally requires the greatest amount of time and often is followed by legal challenges to the issued permit. As shown in Appendix 6, the process of studying, designing, permitting, financing, and constructing water supply reservoirs in Georgia has required a range of 5 to 25 years to complete, based upon six cases selected for illustration.

38. Georgia desires assurance of storage for direct lake withdrawals through storage contracts. As for water supply releases, the Corps coordinates those with the Atlanta Regional Commission on a weekly basis. According to the 2011 ruling of the United States Court of Appeals for the Eleventh Circuit, the Corps is authorized to provide these releases without reallocating storage to those water supply users downstream. Nevertheless, to assure long-term certainty for all concerned, it is important that the Corps, Georgia, and local governments that Georgia may designate enter into a written agreement documenting their understandings regarding how and when releases for water supply will be coordinated.

Why Lake Lanier Continues to be the Best Alternative

39. As discussed in the Reheis Affidavit, numerous studies dating back to the 1960s have consistently concluded that Lake Lanier and the Chattahoochee River provide the most economical and environmentally-protective alternative for meeting the water supply needs of the region. *See* Reheis Affidavit at ¶¶ 21-28. As the Reheis Affidavit explains, a number of alternatives were investigated up through 1999, and none of them was determined to be a reasonable alternative. *See id.*

40. As part of the planning process for its 2003 plans and 2009 update, the Metro Water District considered potential water supply source alternatives

for the communities in the study area through the planning period. The District's *Water Supply and Water Conservation Management Plan* determined that "after reviewing alternatives to the use of the federal reservoirs, the Metro Water District has concluded that there are no alternatives to the Chattahoochee River and the Etowah River as major water supply sources for north Georgia."

41. A water study task force, comprised of metro Atlanta area government and business leaders and assisted by Boston Consulting Group and technical experts, reached the same conclusion in 2009. The Governor of Georgia convened the task force, known as the Water Contingency Planning Task Force, in response to a decision of the United States District Court that threatened to eliminate virtually all water supply withdrawals and releases from Lake Lanier. The task force studied the costs associated with developing alternative sources of water resources to replace Lake Lanier if the Lake were to cease operating for water supply. The task force concluded that "Lake Lanier is by far the best water supply source for the metro region. If the recommended contingency options were required instead, these options would impose significant incremental costs and environmental impacts the region does not currently face." *See Water Contingency Planning Task Force Findings and Recommendations, 21 December 2009.*

IMPACT OF GEORGIA'S MUNICIPAL AND INDUSTRIAL WATER WITHDRAWAL ON LAKE LANIER AND WATERS DOWNSTREAM

42. EPD has performed computer modeling of the reservoir operations and water withdrawals contemplated in Georgia's water supply request to determine the effects of those operations and withdrawals on Lake Lanier and the Chattahoochee River. EPD's modeling is summarized below and discussed in greater depth in Exhibit A, the Memorandum of Dr. Wei Zeng, manager of EPD's Hydrological Analysis Unit. Although Dr. Zeng, for the purpose of his analysis, assumed that the Corps will continue to operate in accordance with the current version of the Revised Interim Operation Plan ("RIOP"), the State of Georgia continues to believe that the ACF system can be operated more efficiently for the benefit of all Basin stakeholders and is proposing alternative to the RIOP in our comments on the ACF Water Control Manual EIS Scoping Comments.

Hydropower Production at Lake Lanier and within the ACF System

43. The projected water withdrawals and Corps operations necessary to support them will not have a material impact on the production of hydropower at Buford Dam or the federal reservoirs in the ACF Basin as a whole, and any impact will be gradual over the next several decades. EPD's modeling indicates that, if viewed in terms of hydropower generation for the federal reservoirs in the ACF Basin as a whole,

when Georgia has reached demands of 705 mgd and year 2040 water supply needs are met throughout the rest of Georgia, average annual power generation will be 970,900 MWh, as compared with the 988,055 MWh of (simulated) annual average generation with 2011 water supply levels. Thus, EPD projects a mere 1.7% decrease in hydropower generation basin-wide. *See* Zeng Memorandum at Exhibit A.

44. When Georgia has reached demands of 705 mgd from Lanier and the Chattahoochee River above the Peachtree Creek confluence, and 2040 water supply demands exist throughout the remainder of the basin, the annual average energy generated at Lake Lanier is modeled to be 116,435 MWh, in comparison to the amount of 123,735 MWh under 2011 water use conditions. Thus, the amount of hydropower produced at Lake Lanier with 2040 demands will be only 6% less than the amount being produced with current water supply demands. The effect will be even less in the years before Georgia's water demand has reached 705 mgd. *See* Zeng Memorandum at Exhibit A.

45. Georgia's conclusions are consistent with those reached by the Corps in its assessment of the impact to hydropower from granting Georgia's water supply request as compared with a baseline that assumed virtually no water supply operations at all. Using that baseline of comparison, the Corps concluded that the water supply operations and lake withdrawals would result in less than a 1% reduction to ACF Basin dependable hydropower capacity, and that the lake withdrawals and water supply releases

contemplated by Georgia's water supply request would result in reductions in basinwide hydropower value of 4.4% and less than 1%, respectively. *See* Zeng Memorandum at Exhibit A.

Recreation at Federal Reservoirs

46. The Corps has established three thresholds for assessing impact of reservoir elevation to recreation at Lake Lanier. The first threshold is called Initial Recreation Impact Level ("IIL"), which is the level at which falling reservoir elevation first has some adverse effect on recreation. The Corps has determined that the IIL at Lake Lanier is 1066 feet above mean sea level (msl). The second threshold, the Recreation Impact Level ("RIL"), is the level at which significant impacts to concessions and recreation occurs. The RIL at Lake Lanier is 1063 feet above msl. The third threshold is Water Access Limitation Level ("WAL"), which is the elevation at which more serious impacts to recreation are observed. The WAL at Lake Lanier is 1060 feet above msl.

47. As discussed at greater length in the attached Memorandum of Wei Zeng, under 2007 hydrologic conditions, with existing water supply demands, Lake Lanier is below RIL for 27 days during the primary recreational season in that year (May 1-September 8). EPD's modeling shows that this level of recreation impact will be increased by only 21 days under 2007 hydrologic conditions if Lanier is operated to meet the metro area's 2040 water needs of 705 mgd and

Georgia's 2040 water supply needs in the remainder of the basin exist. EPD's modeling also shows that if Lanier is operated to meet Georgia's water supply request, metro area water supply needs from Lake Lanier reach 705 mgd, and 2040 water demands exist elsewhere in the basin, during the recreational season, the elevation of Lake Lanier would be below the ILL for only 5% more of the time, below the RIL for only 8% more of the time, and below the WAL 8% more of the time, than under the baseline condition. *See* Zeng Memorandum at Exhibit A.

48. At West Point Lake, the Corps has designated a ILL of 632 feet above msl, a RAL of 628 feet above msl, and a WAL of 627 feet above msl. If Lake Lanier is operated to meet water supply needs of 705 mgd, the number of days when West Point Lake falls below the RIL and ILL actually will be lessened, and there will be only a 1% increase in the number of days in which the elevation falls below the WAL.

49. For Lake Walter F. George, the ILL is 187 feet above msl, the RAL is 185 feet above msl, and the WAL is 184 feet above msl. With 2040 water supply demands imposed on the system, Lake Walter F. George will not experience elevations below RIL or WAL, and will see an increase of only 1% to 2% in the number of days below the ILL. *See* Zeng Memorandum at Exhibit A.

Navigation

50. As the ACF Basin reservoirs, for reasons unrelated to Georgia's water supply usage, are no longer used to support commercial navigation except under rare circumstances, Georgia's water supply request will not impact navigation.

Lake Lanier's Flood Control Function

51. The current request to reallocate the conservation storage to meet Georgia's projected future water supply needs does not involve changing the elevation of the top of conservation pool or the size of the flood control pool. Thus, reallocating part of the conservation storage to accommodate Georgia's increase water will have no impact on the flood control capability of Lake Lanier or the ACF system. Although changes to the size of the flood control pool are not necessary for the Corps to grant Georgia's request, Georgia may still recommend raising the conservation pool, at the appropriate time, if and when it determines that the benefits of doing so exceed any costs.

Impacts on Georgia/Florida State Line Flows

52. EPD's modeling indicates that the net water consumption associated with the municipal and industrial withdrawals contemplated in Georgia's water supply request is projected to have a minor impact on the flow in the Apalachicola River at the state line. *See* Zeng Memorandum at Exhibit A.

CONCLUSION

53. The foregoing information affirms and updates Georgia's 2000 request that the Corps operate Lake Lanier to meet water supply needs of 705 mgd annual average gross withdrawal, including 297 mgd annual average gross withdrawal from Lake Lanier and 408 mgd annual average gross withdrawal from the Chattahoochee River between Buford Dam and the confluence of the Chattahoochee River and Peachtree Creek. Accordingly, the Governor of Georgia has asked that the Corps grant Georgia's request by taking the following actions:

(a) Accommodate water supply demands by providing for 297 mgd annual average gross withdrawal from Lake Lanier and by making releases to allow 408 mgd annual average gross withdrawal from the Chattahoochee River between Buford Dam and the confluence with Peachtree Creek.

(b) Provide certainty for those municipal and industrial water withdrawals from Lake Lanier that require an allocation of storage by entering into long-term contracts. No storage should be required for withdrawals covered by existing relocation contracts or withdrawals of water released to Lake Lanier from Glades Reservoir upstream. Returns to Lake Lanier or its tributaries of treated wastewater should be credited exclusively to the storage accounts of those whom Georgia EPD designates to receive such credit.

(c) Provide certainty for those municipal and industrial water withdrawals from the Chattahoochee

River that rely upon special releases from Lake Lanier by entering into agreements that document the parties' understandings about assurance and coordination of releases.

(d) Release from Lake Lanier enough water to provide a flow in the Chattahoochee River at the confluence with Peachtree Creek as EPD may request to maintain applicable water quality standards.

FURTHER AFFIANT SAITH NOT.

This 10th day of January, 2013.

/s/ Judson H. Turner
Judson H. Turner

Sworn to and subscribed
before me this 10th day
of January, 2013

/s/ Yolanda P. Fanning
Notary Public
My commission expires: Sept. 29, 2013

[Notary Seal]

DECLARATION OF PATRICK TARA

1. My name is Patrick Tara. I am over the age of 21 years and make this declaration based on personal knowledge and facts known to me.

2. I am a professional engineer, licensed in the State of Florida. I have over 20 years of experience in the engineering field, specializing in surface water resources, hydrologically connected surface and groundwater systems and the development of hydrologic model parameters.

3. I hold a Master of Science in Civil Engineering and a Bachelor of Science in Civil Engineering, both from the University of South Florida.

4. My experience includes hydrologic data analysis (both temporal and spatial), hydrologic data collection, and hydrologic and hydraulic numerical modeling. I am experienced in the analysis of temporal hydrologic data, including: performing water budget studies, moving window statistical analysis, time series regression, flow duration, flow exceedance, and baseflow separation. Temporal time series analysis is critical for hydrologic model applications for both model input as well as model output calibration comparison.

5. I have extensive field experience in collecting hydrologic, hydraulic and meteorologic data, including the installation and maintenance of equipment to record tide levels, well levels, lake/river stage, rain, Doppler velocity, weather, Pan ET, and soil moisture.

6. I have developed and applied integrated hydrologic models as well as hydrologic, hydraulic, transport, and water quality, and salinity models. I have applied various models to watersheds, estuaries, rivers, lakes, and tidal inlets.

7. I have been engaged by the State of Florida to analyze the extent to which upstream consumption on the Chattahoochee and Flint Rivers in Georgia has adversely affected flows in the Apalachicola River in Florida.

8. I have reviewed available hydrologic data and performed various modeling analyses, and I conclude that upstream consumption in the Georgia portion of the ACF Basin is depleting the rate and volume of flow in the Apalachicola River.

9. Overall, upstream water use in Georgia has impacted flow in the Apalachicola River at times by up to 3,000-4,000 cubic feet per second ("cfs"). The hydrologic effect of this depletion varies by season. In the winter, its impact is less consequential. In the summer months, when consumption reaches its peak, Georgia uses deprive the River of almost half the total flow it would otherwise receive.

10. Future additional consumption and storage of water in Georgia will result in even lower flows in the Apalachicola River and Bay. This will increase the frequency, duration and intensity of adverse hydrologic impacts I have already documented.

11. I have also analyzed historical climatic data from the Apalachicola-Chattahoochee-Flint River Basin. These data demonstrate that the climate (e.g., reduced rainfall or "drought") cannot be the sole cause of depletions to the Apalachicola River. Rainfall patterns before and after 1950 do not display statistically significant differences. However, the relationship between rainfall and flow has changed over time such that rainfall in the Basin now generates less basin discharge than it historically did. Thus, reductions in rainfall cannot explain all of the impacts on the flows in the Apalachicola River.

12. In my professional experience, the flow reductions I already have documented are substantial.

I declare under penalty of perjury that the foregoing is true and correct.

September 26, 2013
Date

Patrick Tara

DECLARATION OF J. DAVID ALLAN, Ph.D.

1. My name is J. David Allan. I am over the age of 21 years and make this declaration based on personal knowledge and facts known to me.

2. I am a professor of freshwater biology and ecology in the School of Natural Resources and Environment at the University of Michigan, Ann Arbor, Michigan. I received a Ph.D. in zoology from the University of Michigan in 1971, and a B.S. from the University of British Columbia in 1966. I completed a post-doctoral Fellowship at the University of Chicago in 1972.

3. My research has focused on stream ecology; freshwater conservation and management; river flow variability and maintenance of environmental flows; and the impact of anthropogenic influences of river ecosystems. I have authored or coauthored over 100 reports and articles concerning the ecology of rivers and the impact of human activity on rivers. I have also authored or co-authored two textbooks regarding river ecology.

4. I am personally familiar with the Apalachicola River and Bay located in the state of Florida. Over the past 16 months, I have been engaged in a detailed study concerning the ecological impacts to the Apalachicola River drainage basin, examining ecological harm that has resulted due to alteration of the flow regime of the Apalachicola River by artificially diminished inflows.

5. The Apalachicola River is the largest river in the Florida panhandle in terms of annual flow. Its floodplain is the largest river floodplain in Florida, and having minimal development, it remains one of the most intact forested floodplains in the contiguous United States. The freshwater, non-tidal floodplain ranges from 1-5 miles in width and covers an area of roughly 82,200 acres. Wet season high flows in the Apalachicola River historically have provided annual periods of inundation and connectivity to diverse floodplain habitats including complex networks of streams and sloughs within extensive areas of wetland forests. Flows normally decline following the flood season in winter and early spring, but very low flows in late spring and summer have occurred much more frequently and for much longer durations over the last decade than at any time since stream gage records began in 1922.

6. Ecosystems of the Apalachicola River and floodplain developed due to the natural flow regime of the Apalachicola River. Native mussels, fishes, floodplain trees and other biota, including federally listed species, depend on magnitude of river flow, its duration, frequency, and seasonal timing and rate of change to meet habitat requirements and complete their life cycles. Significant deviations from the natural flow regime are harmful to the ecosystem.

7. Ecosystems of the Apalachicola River have already suffered harm of a serious magnitude as a result of deviations in the natural flow regime. The construction of upstream dams, land use practices,

and withdrawals of water, such as for irrigation in Georgia, have altered the natural flow regime of the Apalachicola River. Alteration of the natural flow regime has harmed at least three species, now federally listed as threatened or endangered under the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531 *et seq*. Stresses associated with artificially diminished flows and river stage have negatively affected other aspects of aquatic habitat in the Apalachicola Basin, especially those that occur during low flow periods during spring, summer and fall.

8. The biodiversity of the Apalachicola Region in Florida is reflected in the presence of 142 freshwater and estuarine fish species (99 species in nontidal reaches plus an additional 43 species in tidal reaches of the river), 26 species of mussels (including 3 Federally listed mussels and 4 candidate species being petitioned for Federal listing), over 1,600 species of plants (including 342 species in wetland forests of the river floodplain). The Apalachicola River has the largest river floodplain forest in Florida and the greatest number of freshwater fish species in Florida. This river basin has the greatest herpetofaunal species richness in North America north of Mexico and one of the most important areas for reptiles and amphibians (particularly anurans, salamanders, snakes and turtles) in the United States. Ogeechee tupelo trees in the floodplain forest of the Apalachicola River are the principal source of commercially produced tupelo honey in the U.S.

9. Inflows from the Flint and Chattahoochee Rivers contribute to maintenance of critical habitat in the Apalachicola River for three species listed as threatened or endangered under the ESA. These species include the Gulf sturgeon and two mussel species, the Fat Three-Ridge and the Purple Bankclimber. In addition to these federally protected species, the flow regime of the Apalachicola River supports essential habitat for a wide range of species that are dependent on the Apalachicola River and its floodplain. The non-tidal portion of the Apalachicola River and floodplain are important for their high level of biodiversity and for the natural ecological processes that depend on river-floodplain connectivity and contribute to the health of the estuary and bay; and for the regional way of life that includes fishing, hunting, harvesting of tupelo honey, and forestry operations.

10. Flow reductions due to upstream consumption in Georgia to date have disrupted critical biotic components within the River and along its floodplain. These reductions have, for example, increased the frequency, duration and intensity of adverse biological events, such as the length of time that essential riverine and floodplain habitats are exposed to the atmosphere. Such exposure has resulted in the stranding of mussels, floodplain drying, and reductions in spawning and rearing habitat for a number of fish species.

11. Projected future water uses in Georgia are expected to result in low flows of greater frequency,

duration and intensity and will further harm existing plants and animals in floodplain habitats. Many existing species are likely to decline in number and risk becoming threatened, endangered, or extinct.

12. For example, further flow depletions will increase the extent to which side-channels are cut off from the main river, leaving stranded local populations of fish, mussels, and other components of the aquatic food web. Further depletions will also reduce the amount of viable habitats for tupelo trees and other floodplain forest resources.

13. Ultimately, future storage and uses of water in the Flint and Chattahoochee River Basins will cause increases in the duration, frequency, and intensity of low flows and rate of drawdown in the Apalachicola River attributable to upstream consumption. These further disruptions of the flow regime will cause additional irreparable harm of a serious magnitude through the continued degradation of the ecosystems of the Apalachicola River.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 30th day of September, 2013

J. David Allan

DECLARATION OF PAUL A. MONTAGNA, Ph.D.

1. My name is Paul A. Montagna. I am over the age of 21 years and make this declaration based on personal knowledge and facts known to me.

2. I am the Endowed Chair for Ecosystem Studies and Modeling at the Harte Research Institute for Gulf of Mexico Studies. I am also a professor of Environmental Science and coordinator of the Coastal & Marine System Science Doctoral Program, at Texas A&M University-Corpus Christi in Corpus Christi, Texas. I received a Ph.D. in biology from the University of South Carolina in 1983, an M.S. in biology from Northeastern University in Boston, Massachusetts in 1976, and a B.S. in biology from State University of New York at Stony Brook, New York in 1971. My research interests focus on ecological processes and changes in estuaries resulting from changes to freshwater inflows. I have authored over 100 papers concerning coastal ecosystems and their functional mechanisms.

3. I am personally familiar with the Apalachicola River and Bay located in the state of Florida. The Apalachicola River and Bay system has been recognized as a unique and environmentally sensitive resource. In fact, the Apalachicola Bay is among the most productive estuaries in the Gulf of Mexico. I have been engaged in a detailed study of the ecological impact to the Apalachicola Bay that has resulted from flow reductions to date and that are likely to result if the flow regime of the Apalachicola River is

further diminished. Multiple species and resources in the estuary and Bay have been adversely impacted already.

4. A poignant example is the eastern oyster. Historically, Apalachicola Bay has been one of the most productive oyster fisheries in America. Freshwater from the Apalachicola River that discharges into the Apalachicola Bay provides essential nutrients to the Bay and reduces its salinity to create conditions necessary to support commercial oyster industries. Altering the amount, rate and timing of the freshwater inflows to the Bay causes changes to these necessary conditions. Specifically, there is a direct, inverse relationship between inflow and salinity in the Bay, such that lower flows increase salinity and higher flows reduce salinity. Also, as freshwater flows in the Apalachicola River decline, the amount and quality of nutrients is diminished and the salinity increases, thereby creating conditions that are harmful to oysters and other shellfish.

5. Reduced flows from the Apalachicola River have caused increased salinity throughout the Bay. This impact alone has damaged and threatens the very survival of Apalachicola Bay oysters and other species over the long term.

6. Because of reduced freshwater inflows from the Apalachicola River that led directly to poor conditions for oyster growth and survival, a severe decline in the oyster harvests has occurred. Data show oyster production on commercially important oyster reefs in

2012 was the lowest in the past 20 years. Drastic declines in all age classes of oysters indicate that a collapse of the fishery has occurred in 2012. These data also indicate that many of the reefs have too few oysters to support commercial harvesting.

7. Flows to the Apalachicola River will be further depleted by anticipated future upstream consumption. When this occurs, the frequency, duration and intensity of already extant adverse impacts will increase in Apalachicola Bay. Reduced river flows will further reduce the amount of nutrients and sediments flowing into the Apalachicola Bay and create even higher salinity levels. Reduced nutrient inputs and higher salinity levels will reduce estuarine productivity, alter the historical community structure of the bay, and will prove harmful to all estuarine dependent species, but particularly those fixed to the bottom, such as oysters. As a result, oyster production will continue to decline to the point of extirpation.

8. Loss of viable oyster bars will cause a loss of important ecosystem services in the Apalachicola Bay. Oysters produce structure that performs multiple beneficial ecosystem services such as sediment stabilization, erosion control, shoreline protection, storm surge absorption, critical habitat for other estuarine species, and water quality enhancement by particle and nutrient removal. All of these services have suffered injury and will be lost unless oysters are protected from declining freshwater inflows from the Apalachicola River.

9. Further depletion of the flows of the Chattahoochee and Flint Rivers will result in low flows of greater frequency, duration, and intensity for the Apalachicola River. This increased disruption of the historical flow regime will, in turn, cause additional harmful changes of a serious magnitude to the Apalachicola Bay, and commercially viable oyster populations will cease to exist.

10. I declare under penalty of perjury that the foregoing is true and correct.

September 25, 2013
Date

Paul A. Montagna